

DEPARTMENT OF PUBLIC WORKS

Transportation Division 10455 Armstrong St. Room 200A Fairfax, VA 22030

Phone: 703-385-7889

UNIVERSITY DRIVE TRAFFIC CALMING

PROJECT DESCRIPTION

THE PURPOSE OF THE UNIVERSITY DRIVE TRAFFIC CALMING IMPROVEMENTS IS TO IMPROVE THE SAFETY OF THE LOCAL RESIDENTS WITH THE POTENTIAL INCREASE IN TRAFFIC ON UNIVERSITY DRIVE.

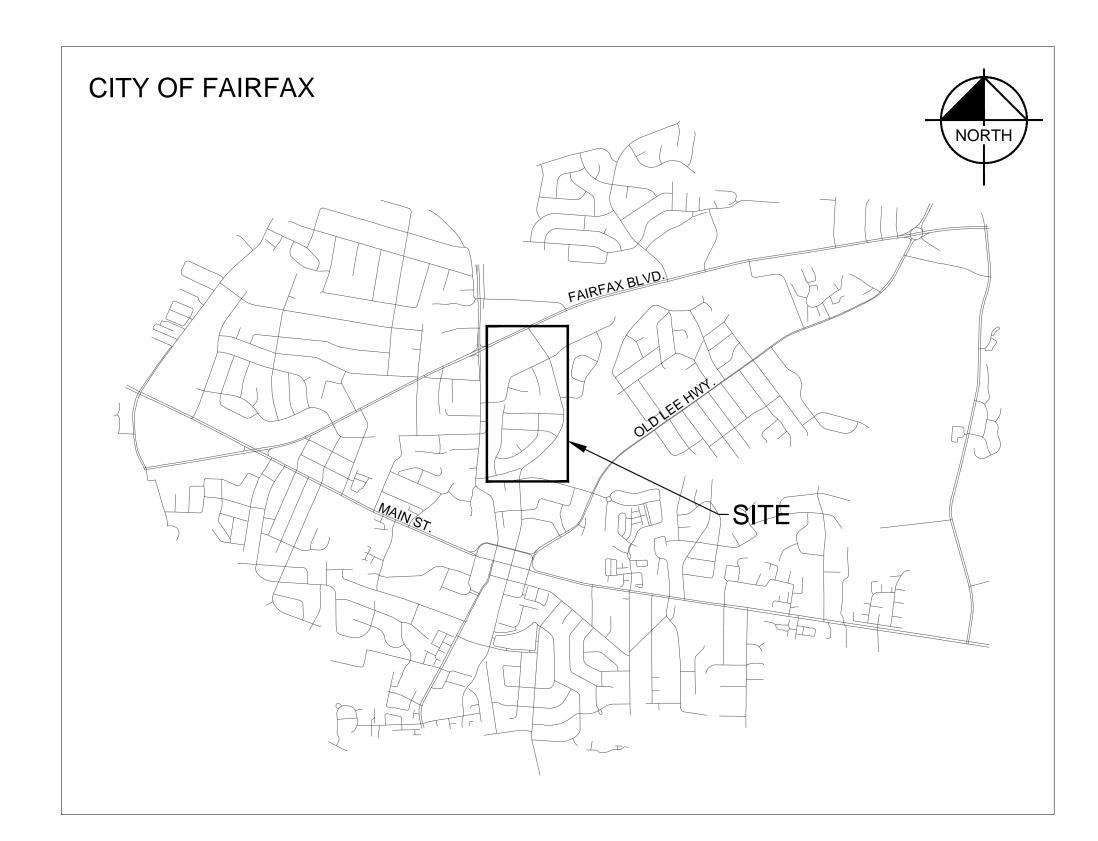
THE WORK OF THIS PROJECT INCLUDES THE FOLLOWING IMPROVEMENTS:

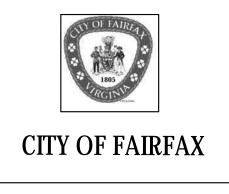
- 1. SIDEWALK CONSTRUCTION BETWEEN WOOD ROAD AND STRATFORD AVENUE
- 2. CURB EXTENSION CONSTRUCTION AT THE FORD ROAD INTERSECTION AND STRATFORD AVENUE INTERSECTION
- 3. CHICANE CONSTRUCTION BETWEEN FORD ROAD AND WOOD ROAD AND JEAN STREET AND STRATFORD AVENUE
- 4. CURB REALIGNMENT AT THE KENMORE DRIVE INTERSECTION
- 5. PEDESTRIAN ACCESSIBLE ADA RAMPS
- 6. SIGNING AND PAVEMENT MARKING
- 7. LANDSCAPING
- 8. LIGHTING

THE WORK OF THIS PROJECT WILL INCLUDE, BUT IS NOT LIMITED TO, DEMOLITION, EXCAVATION, RESTORATION, LANDSCAPING, SIGNING AND PAVEMENT MARKING, AND MAINTENANCE OF TRAFFIC.

THE CONTRACTOR SHALL COMPLETE THE WORK IN ACCORDANCE WITH THESE PLANS, REFERENCE SPECIFICATIONS, AND OTHER CONTRACT DOCUMENTS.

Location Map





DEPARTMENT OF PUBLIC WORKS

Transportation Division 10455 Armstrong St. Room 200A Fairfax, VA 22030

Phone: 703-385-7889



Seal



Revisions	Date
	_
DESIGNED BY	
DRAWN BY	
CHECKED BY	

TABLE OF CONTENTS

SHEET NO.	DESCRIPTION
1	COVER/INDEX SHEET
2A-D	GENERAL NOTES AND DETAILS
2E	RIGHT OF WAY DATA
2F	SURVEY CONTROL DATA
2G	CONSTRUCTION ALIGNMENT DATA
2H-I	BMP CALCULATIONS AND DETAILS
3A-F	CONSTRUCTION PLAN AND INTERIM
	PAVEMENT MARKINGS
4A-F	FINAL PAVEMENT MARKING PLAN
5A-F	EROSION AND SEDIMENT CONTROL
6A-C	CURB RAMP DETAILS
7A-G	LANDSCAPE PLAN AND DETAILS
XS1-7	CROSS SECTIONS

CITY OF FAIRFAX, VIRGINIA DEPARTMENT OF PUBLIC WORKS

UNIVERSITY DRIVE TRAFFIC CALMING

KENMORE DRIVE TO STRATFORD AVENUE

JUNE 17, 2020

UPC # 113121

SCALE see graphic

SCALE

GENERAL NOTES

(THESE GENERAL NOTES SHALL BE USED WHERE THEY ARE APPLICABLE TO THE PROJECT PLANS)

PERMIT NOTES

- 1. A STREET OPENING PERMIT IS REQUIRED FOR ANY WORK IN A CITY RIGHT—OF—WAY OR EASEMENT. THE PERMIT CAN BE OBTAINED FROM THE PUBLIC WORKS DEPARTMENT. FOR INFORMATION, CALL 703.385.7980 OR 703.385.7810.
- 2. ANTICIPATED NOTICE TO PROCEED IN JUNE 2020.
- 3. ALL SIDEWALKS, CURBS, GUTTERS, DRIVEWAYS, STREETS, RETAINING WALLS, AND STORM INLETS MUST BE INSPECTED BY THE CITY. ALL WORK IN THE CITY STREETS WILL BE PERFORMED MONDAY—FRIDAY BETWEEN THE HOURS OF 9:00AM AND 3:30PM. NO WORK IS TO BE PERFORMED ON WEEKENDS OR HOLIDAYS UNLESS PRE APPROVED BY THE DIRECTOR OF PUBLIC WORKS.
- 4. INSPECTIONS PERFORMED BY THE FACILITIES INSPECTOR WILL REQUIRE A (4) HOUR NOTICE PRIOR TO INSPECTIONS.

GENERAL STANDARD

- 1. THE PUBLIC WORKS DIRECTOR MUST BE NOTIFIED (1) WEEK PRIOR TO PRE-CONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO COMMENCEMENT OF LAND DISTURBING ACTIVITY AND (1) ONE WEEK PRIOR TO FINAL INSPECTION. THE SITE PLAN COORDINATOR IN ZONING MUST BE NOTIFIED (1) ONE WEEK PRIOR TO THE PRE-CONSTRUCTION PHASE.
- 2. CONTRACTOR TO COORDINATE WITH CITY ON TIMING OF CURB AND GUTTER REPAIR AND REPLACE. APPROXIMATELY 1 MONTH AFTER REPAIRS, PAVEMENT MARKINGS CAN BE INSTALLED.
- 3. A PRECONSTRUCTION MEETING WILL BE REQUIRED (3) DAYS PRIOR TO ANY CONSTRUCTION.

 CONTRACTORS WILL NOTIFY THE PUBLIC WORKS DEPARTMENT OR FACILITIES INSPECTOR FOR ALL WORK DONE ON SITE AND OFF SITE (1) DAY PRIOR TO STARTING.
- 4. THE CONTRACTOR SHALL PROVIDE ADEQUATE MEANS FOR PARKING CONSTRUCTION EQUIPMENT AND PROVIDE EMPLOYEE PARKING ON SITE.
- 5. ALL CONSTRUCTION SHALL CONFORM TO THE LATEST CITY OF FAIRFAX STANDARDS, VIRGINIA DEPARTMENT OF TRANSPORTATION AND THE VIRGINIA SEDIMENT AND EROSION CONTROL CURRENT SPECIFICATIONS, EXCEPT AS SHOWN OR ALTERED BY THESE PLANS.

EROSION AND SEDIMENT CONTROL NOTES

- 1. PRIOR TO ANY LAND DISTURBING OPERATIONS, THE EROSION CONTROLS, AS SPECIFIED BY THE ENGINEERING PLANS, SHALL BE INSTALLED. ALL MECHANICAL AND VEGETATIVE PRACTICES SHALL BE IN CONFORMANCE WITH THE REQUIREMENTS CONTAINED IN THE CITY OF FAIRFAX PUBLIC FACILITIES MANUAL AND THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.
- 2. ALL AREAS WHICH ARE DISTURBED BY THIS CONSTRUCTION AND WHICH ARE NOT PAVED OR BUILT UPON SHALL BE ADEQUATELY STABILIZED TO CONTROL EROSION AND SEDIMENTATION. ACCEPTABLE STABILIZATION SHALL BE APPROVED BY THE CITY OF FAIRFAX ENGINEER.
- 3. AS DISTURBED AREAS, NOT CONSTRUCTED ON, ARE FINALLY GRADED, THEY SHALL BE PREPARED, LIME AND FERTILIZER APPLIED, AND SEEDED ACCORDING TO THE CITY OF FAIRFAX PUBLIC FACILITIES MANUAL SPECIFICATIONS AND AS APPROVED BY THE CITY OF FAIRFAX ENGINEER.
- 4. DURING CONSTRUCTION, ALL STORM SEWER INLETS SHALL BE PROTECTED BY SILT TRAPS.
- 5. THE CONTRACTOR SHALL PROPERLY INSTALL AND MAINTAIN EROSION AND SEDIMENT CONTROLS FOR THE LIFE OF THE PROJECT AND ROUTINELY CHECK CONTROL DEVICES BEFORE, DURING AND AFTER STORM EVENTS.
- 6. FOR FURTHER REQUIREMENTS AND DETAILS OF TREE PRESERVATION, PLANTING, EROSION AND SEDIMENT CONTROL, SEE THE CITY OF FAIRFAX PUBLIC FACILITIES MANUAL AND/OR THE EROSION AND SEDIMENT CONTROL HANDBOOK.

CONSTRUCTION NOTES

- 1. ALL CONSTRUCTION, INCLUDING PROPOSED LANDSCAPING, SHALL CONFORM TO THE CURRENT EDITION OF THE CITY OF FAIRFAX PUBLIC FACILITIES MANUAL AND THE VIRGINIA DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS.
- 2. ALL SUBGRADE, SUBBASE, AND BASE MATERIAL SHALL BE PLACED AND COMPACTED TO THE DENSITY SPECIFIED IN THE CITY OF FAIRFAX PUBLIC FACILITIES MANUAL.
- 3. COMPACTION TESTS SHALL BE PERFORMED BY THE CONTRACTOR. SUBGRADE FOR CURB, GUTTER AND SIDEWALK SHALL BE EVERY 50 FEET; SUB-BASE SHALL BE ALTERNATED EVERY 25 FEET. DRIVEWAYS REQUIRE TWO TESTS ON SUBGRADE AND SUB-BASE.
- 4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO TO CLEAN ALL STREETS AND TO TAKE NECESSARY MEASURES TO ENSURE THE ROADS ARE MAINTAINED IN A CLEAN, MUD AND DUST FREE CONDITION AT ALL TIMES.

5. ALL CURB AND GUTTER SHOWN ON PLANS SHALL BE ON STRAIGHT TANGENT GRADES. THE CONTRACTOR SHALL ROUND ALL VERTICAL BREAKS WITH SMOOTH SPLINE CURVES. PROPOSED TOP OF CURB GRADES SHALL BE ADJUSTED IN THE FIELD TO MAINTAIN A SMOOTH GRADE AND TO MITIGATE THE PONDING OF WATER IN THE ROADWAY.

STORM SEWER

- 1. A WATERTIGHT CONNECTION SHALL BE MADE AT ALL PIPES ENTERING DRAINAGE STRUCTURES AND BETWEEN SECTIONS OF PIPE.
- 2. INVERT ELEVATIONS ARE TAKEN AT THE FACE OF THE STRUCTURE.
- 3. ALL INVERT STRUCTURES SHALL BE SHAPED ACCORDING TO VDOT STANDARD IS—1 AND REQUIREMENTS IN THE CITY OF FAIRFAX PUBLIC FACILITIES MANUAL.
- 4. MINOR FIELD ADJUSTMENTS IN THE ELEVATION AND ALIGNMENT OF STORM SEWER AND STRUCTURE MIGHT BE NECESSARY TO MEET EXISTING CONDITIONS AND PROPOSED FINAL GRADING. THE CONTRACTOR SHALL NOTIFY CITY OF FAIRFAX PUBLIC WORKS DIRECTOR PRIOR TO MAKING ANY NECESSARY ADJUSTMENTS.
- 5. TOP OF STRUCTURES SHALL BE SET TO MATCH CURB AND GUTTER, SIDEWALK AND/OR DITCH CONSTRUCTION.

SIGNING AND MARKING:

- 1. ALL PROPOSED SIGNING AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH CITY OF FAIRFAX CONSTRUCTION STANDARDS.
- 2. ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC UNLESS OTHERWISE NOTED IN THE PAVEMENT MARKING LEGEND.
- 3. ANY EXISTING PAVEMENT MARKINGS THAT WILL CONFLICT WITH PROPOSED PAVEMENT MARKINGS SHALL BE COMPLETELY ERADICATED.
- 4. PROPOSED SIGN LOCATIONS ARE APPROXIMATE AND SHALL BE MODIFIED IN THE FIELD TO AVOID CONFLICT WITH UNDERGROUND UTILITIES OR OTHER CONSTRUCTIONS.
- 5. PROPOSED SIGNS SHALL BE INSTALLED SO THAT NO PORTION OF THE SIGN PANEL OVERHANGS ADJACENT ROADWAY PAVEMENT, I.E SHALL NOT HANG IN FRONT OF A FACE OF CURB.
- 6. PROPOSED SIGNS AND POSTS SHALL BE INSTALLED SO THEY DO NOT BLOCK THE VISIBILITY OF ANY EXISTING SIGNS OR SIGNALS.
- 7. PROPOSED SIGNS AND POSTS SHALL BE CLEAR OF EXISTING FIRE HYDRANTS, SURFACE UTILITY, AND OVERHEAD UTILITY EQUIPMENT.
- 8. FOR NEW POST INSTALLATION, THE CONTRACTOR SHALL VERIFY THAT THERE ARE NOT CONFLICTING UNDERGROUND OR OVERHEAD UTILITIES.
- 9. ALL SIGN LOCATIONS SHOWN ON THE PLANS ARE SCHEMATIC AND MAY NOT REFLECT ACTUAL FIELD LOCATION. THE CONTRACTOR SHALL VERIFY EACH LOCATION PRIOR TO INSTALLING A SIGN. IF AT ANY POINT THE CONTRACTOR FINDS A CONFLICT, THE CONTRACT SHALL CONTACT THE ENGINEER PRIOR TO INSTALLING THE PROPOSED SIGN. PROPOSED SIGN LOCATIONS CAN BE ADJUSTED AS APPROVED BY THE FNGINFER.
- 10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING WITH MATCHING MATERIALS ANY PAVEMENT, PAVEMENT MARKINGS, CURB AND GUTTER, SIDEWALK, ETC. THAT ARE DAMAGED DURING CONSTRUCTION.

MAINTENANCE OF TRAFFIC

- 1. ALL TRAFFIC MAINTENANCE SHALL CONFORM WITH THE TYPICAL TRAFFIC CONTROLS SPECIFIED IN THE PLANS AS WELL AS THE FOLLOWING AND LATEST REVISIONS TO: THE VIRGINIA WORK AREA PROTECTION MANUAL, VA ROAD AND BRIDGE SPECIFICATIONS, VA ROAD AND BRIDGE STANDARDS AND THE FHWA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- 2. ALL REQUIRED CONSTRUCTION SIGNING, TEMPORARY PAVEMENT WIDENING, TEMPORARY LAND STABILIZATION, TRAFFIC BARRIERS, TEMPORARY PAVEMENT MARKINGS, ERADICATION, ETC., SHALL BE INCLUDED IN THE CONTRACTOR'S BID PRICE FOR TRAFFIC MAINTENANCE.
- 3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAILY TRAFFIC CONTROL TO PROPERLY MAINTAIN TRAFFIC THROUGHOUT THE PROJECT.

(CONTINUED NEXT PAGE)



DEPARTMENT OF PUBLIC WORKS

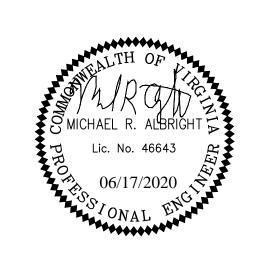
Transportation Division 10455 Armstrong St. Room 200A Fairfax, VA 22030

Phone: 703-385-7889



© 2018 KIMLEY—HORN AND ASSOCIATES, INC 11400 Commerce Park Drive Suite 400 Reston, Virginia 20191 Phone: 703—674—1300 Fax: 703—674—1350

Seal



Revisions	Date
	<u> </u>
	_
	<u> </u>
	
	
DESIGNED BY	
DRAWN BY	

CHECKED BY

CITY OF FAIRFAX, VIRGINIA DEPARTMENT OF PUBLIC WORKS

UNIVERSITY DRIVE TRAFFIC CALMING
KENMORE DRIVE TO STRATFORD AVENUE
GENERAL NOTES

UPC # 113121

SCALE

SEE GRAPHIC SCALE SHEET

2A

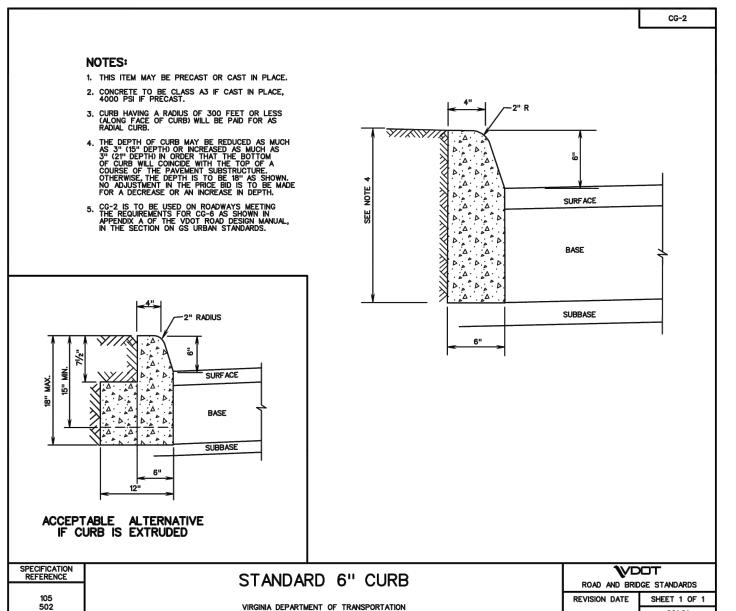
GENERAL NOTES AND STANDARD DETAILS

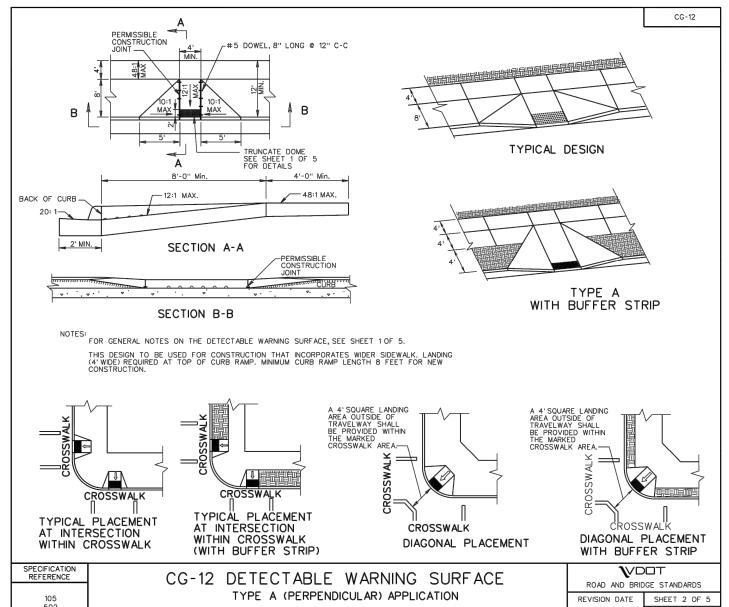
MAINTENANCE OF TRAFFIC (CONTINUED)

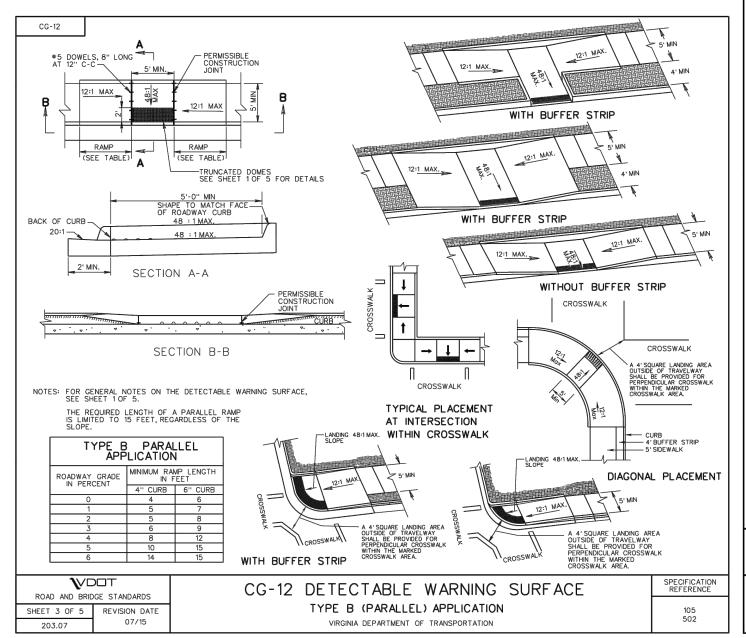
- 4. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL DRIVEWAYS DURING CONSTRUCTION.
- 5. PEDESTRIAN DETOUR SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION ACCORDING TO VIRGINIA WORK AREA PROTECTION MANUAL AND MUTCD GUIDELINES.
- 6. ALL EXISTING SIGNS SHALL BE MAINTAINED DURING CONSTRUCTION.

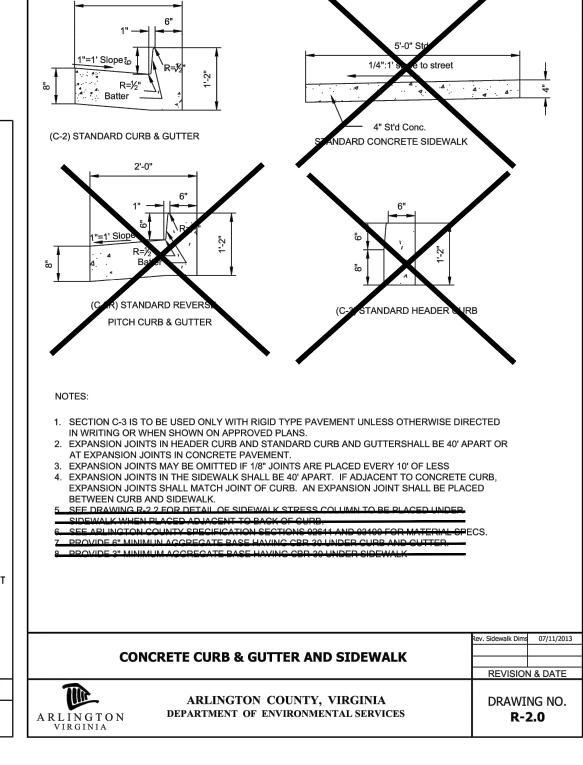
LANDSCAPING

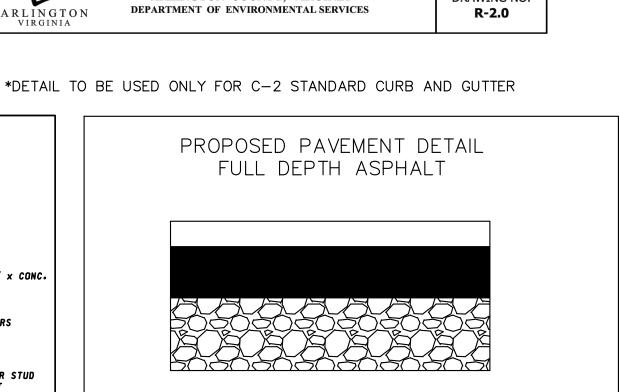
- 1. PROPOSED LANDSCAPING WITHIN RIGHT OF WAY SHALL BE MAINTAINED BY THE CITY.
- 2. ALL DISTURBED AREAS ARE TO BE REPLACED WITH PERMANENT SEEDING IN ACCORDANCE WITH THE VIRGINIA EROSION AND SEDMENT CONTROL HANDBOOK SECTION 3.32 WITHIN 5 DAYS OF CONSTRUCTION COMPLETION.











2" ASPHALT CONCRETE SURFACE COURSE, TYPE SM-9.5A 4" ASPHALT CONCRETE BASE COURSE, TYPE BM-25.0

8" AGGREGATE BASE MATERIAL TYPE I, NO. 21A



DEPARTMENT OF PUBLIC WORKS

Transportation Division 10455 Armstrong St. Room 200A Fairfax, VA 22030

Phone: 703-385-7889

© 2018 KIMLEY-HORN AND ASSOCIATES. INC 11400 Commerce Park Drive Reston, Virginia 20191 Phone: 703-674-1300 Fax: 703-674-1350



Date Revisions DESIGNED BY DRAWN BY CHECKED BY

CITY OF FAIRFAX, VIRGINIA DEPARTMENT OF PUBLIC WORKS

UNIVERSITY DRIVE TRAFFIC CALMING KENMORE DRIVE TO STRATFORD AVENUE GENERAL NOTES

UPC # 113121

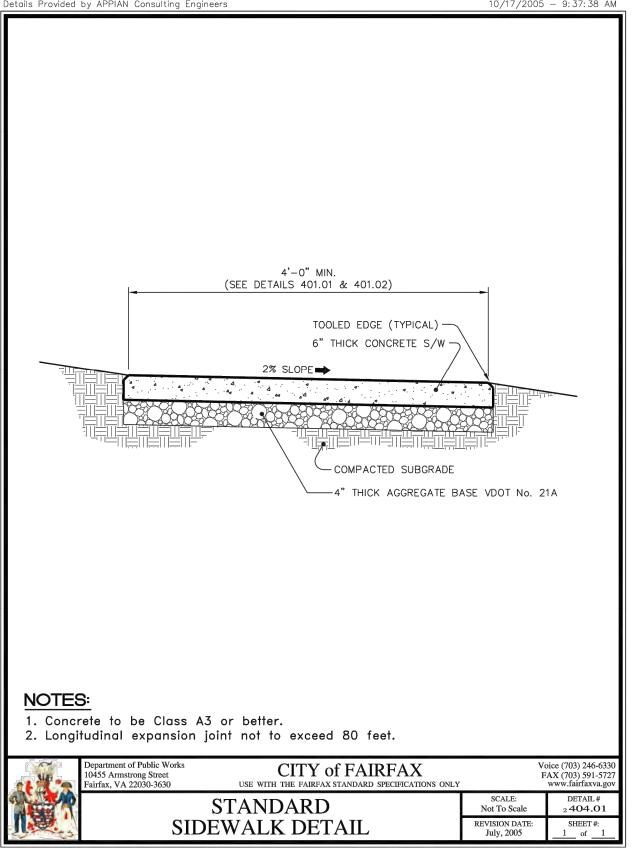
SCALE SEE GRAPHIC SCALE

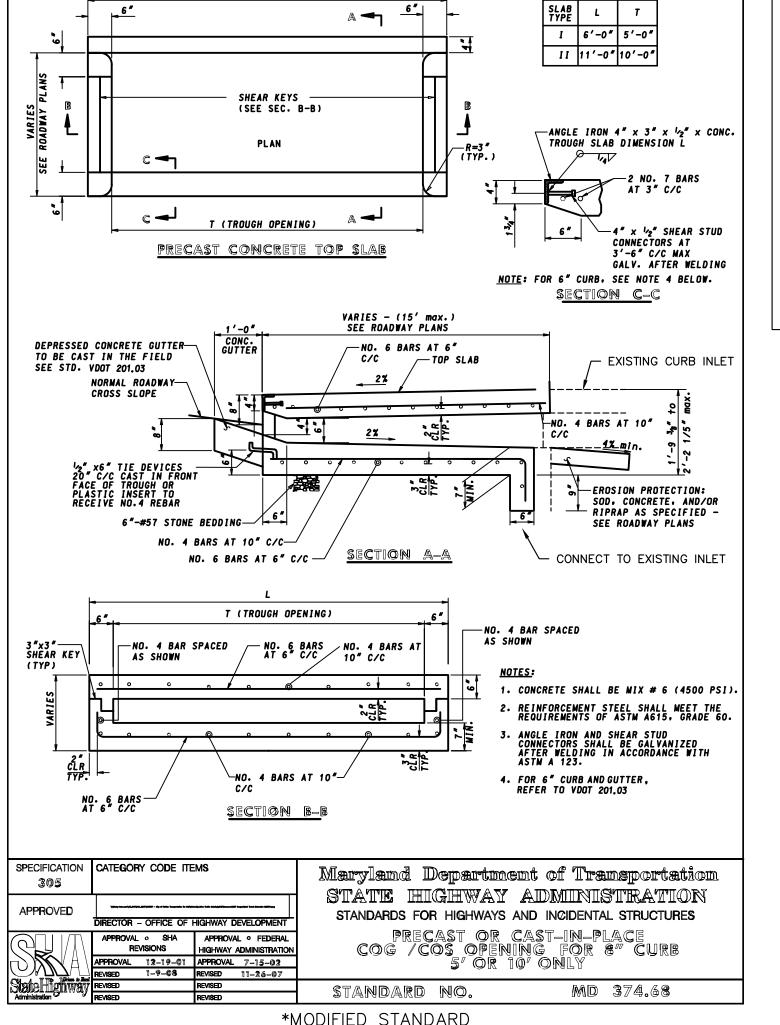
SHEET

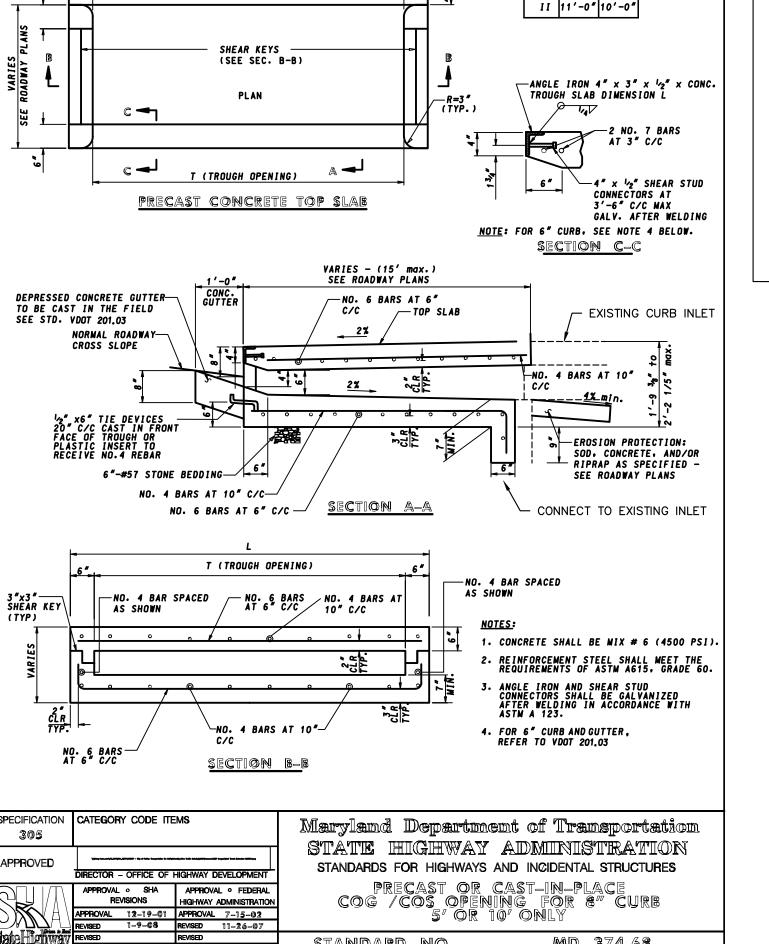
10/17/2005 - 9:36:59 AM CONCRETE APRON FILLER - POURED WITH S/W 5' CONC. APRON CONCRETE SIDEWALK - PLACE 1/2" EXP. JOINT HERE WHEN CROSSING EXISTING CONCRETE DRIVES - THICKNESS = 7" AT DRIVEWAY CROSSING SCORE JOINT -DRIVEWAY BY OTHERS ∠ RAMP L PAVEMENT W/MAX. RECOMMENDED GRADE COMPACTED BACKFILL PLACE 1/2" EXP. JOINT HERE WHEN CROSSING EXISTING CONCRETE DRIVES

SECTION A-A · Residential driveway to be 12' minimum, 16' maximum desirable 4. Curb shall be tapered to finish flush with sidewalk. 5. Beginning radius shall not encroach on adjacent properties based on a projection of property line from the right-of-way to the curb line. . Sidewalk section shall not be required along streets which are not planned for CITY of FAIRFAX FAX (703) 591-57 www.fairfaxva.g

DETAIL# 2404.03







*HIGH EARLY STRENGTH CONCRETE SHALL BE USED

STREET CURB CUT FOR

DRIVEWAYS ON C&G STREETS

GENERAL NOTES AND STANDARD DETAILS (CONTINUED)

SEQUENCE OF CONSTRUCTION

1. IDENTIFY THE WORK ZONE LOCATION, LENGTHS, AND WIDTHS

2. NOTE THE HOURS THE CONSTRUCTION AREA WILL BE ACTIVE:

CONSTRUCTION AREA SHALL BE CONSIDERED ACTIVE WHEN ANY IMPACT TO

TRAFFIC OCCURS

CONSTRUCTION AREA HOURS HAVE THE FOLLOWING LIMITATIONS:

		LANE CLOSUI	RES	
	MONDAY TO THURSDAY	FRIDAY	SATURDAY	SUNDAY
DAY TIME			*NOT ALLOWED	*NOT ALLOWED
NIGHT TIME	*NOT ALLOWED	*NOT ALLOWED	*NOT ALLOWED	*NOT ALLOWED

*NIGHT TIME AND WEEKEND WORK SHALL NOT BE ALLOWED UNLESS APPROVED BY THE CITY OF FAIRFAX

NO LANE CLOSURES WILL BE ALLOWED FROM NOON ON THE DAY BEFORE A HOLIDAY UNTIL NOON ON THE WORKDAY FOLLOWING THE HOLIDAY. HOLIDAYS INCLUDE ALL STATE AND FEDERAL HOLIDAYS.

DESIGNATION OF PEAK HOUR TIMES:

PEAK HOURS ARE 6:00AM THROUGH 9:00AM AND 3:30PM THROUGH 6:30PM.

3. THIS TMP/SEQUENCE OF CONSTRUCTION PLAN IS INTENDED AS A GUIDE. IT IS NOT TO ENUMERATE EVERY DETAIL WHICH MUST BE CONSIDERED IN THE CONSTRUCTION OF EACH PHASE, BUT ONLY SHOW THE GENERAL HANDLING OF EXISTING TRAFFIC. IF THE CONTRACTOR IS TO DEVIATE FROM THE APPROVED TMP/SOC, A NEW REVISED TMP/SOC MUST BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL. CONSTRUCTION SEQUENCE TO BE USED BY THE CONTRACTOR SHALL BE APPROVED BY THE CITY PRIOR TO PROCEEDING WITH WORK.

PHASE 1

- 1. CONTRACTOR IS TO IMPLEMENT VWAPM TTC-28.0 TO CONSTRUCT THE PROPOSED CURB REALIGNMENT AT THE INTERSECTION OF UNIVERSITY DRIVE AND KENMORE DRIVE.
- 2. CONTRACTOR IS TO IMPLEMENT VWAMP TTC-1.0 TO INSTALL THE PROPOSED LIGHT POLE AT THE INTERSECTION OF UNIVERSITY DRIVE AND KENMORE DRIVE.
- 3. CONTRACTOR TO ERADICATE CONFLICTING PAVEMENT MARKINGS AND INSTALL TEMPORARY PAVEMENT MARKINGS.

PHASE 2

- 1. CONTRACTOR IS TO IMPLEMENT VWAPM TTC-23.1 TO CONSTRUCT THE PROPOSED CURB AND GUTTER, SIDEWALK, AND CURB RAMP LOCATED ON THE EAST SIDE OF UNIVERSITY DRIVE AT THE INTERSECTION OF UNIVERSITY DRIVE AND FORD ROAD.
- 2. CONTRACTOR IS TO IMPLEMENT VWAPM TTC-28.0 TO CONSTRUCT THE PROPOSED CURB AND GUTTER, INLET EXTENSION, AND SIDEWALK LOCATED AT THE SOUTH WEST CORNER OF THE UNIVERSITY DRIVE AND FORD ROAD INTERSECTION.
- 3. CONTRACTOR IS TO IMPLEMENT VWAPM TTC-28.0 TO CONSTRUCT THE PROPOSED CURB AND GUTTER, INLET EXTENSION, AND SIDEWALK LOCATED AT THE NORTH WEST CORNER OF THE UNIVERSITY DRIVE AND FORD ROAD INTERSECTION.
- 4. CONTRACTOR TO ERADICATE CONFLICTING PAVEMENT MARKINGS AND INSTALL TEMPORARY PAVEMENT MARKINGS.
- 5. CONTRACTOR TO RELOCATE EXISTING SIGNAGE.

PHASE 3

- 1. CONTRACTOR IS TO IMPLEMENT VWAPM TTC-1.0 TO INSTALL THE PROPOSED LIGHT POLES BETWEEN THE INTERSECTIONS OF UNIVERSITY DRIVE AND FORD ROAD AND UNIVERSITY DRIVE AND JEAN STREET.
- 2. CONTRACTOR IS TO IMPLEMENT VWAPM TTC-23.1 TO CONSTRUCT THE PROPOSED CURB AND RAIN GARDENS BETWEEN THE INTERSECTIONS OF UNIVERSITY DRIVE AND FORD ROAD AND UNIVERSITY DRIVE AND JEAN STREET
- 3. CONTRACTOR TO ERADICATE CONFLICTING PAVEMENT MARKINGS AND INSTALL TEMPORARY PAVEMENT MARKINGS.
- 4. CONTRACTOR TO INSTALL PROPOSED SIGNAGE.

PHASE

- 1. CONTRACTOR IS TO IMPLEMENT VWAPM TTC-28.0 TO CONSTRUCT PROPOSED CURB RAMP AT THE INTERSECTION OF UNIVERSITY DRIVE AND JEAN STREET.
- 2. CONTRACTOR IS TO IMPLEMENT VWAPM TTC-23.1 TO CONSTRUCT PROPOSED SIDEWALK, CURB RAMP, AND RETAINING WALL AT THE INTERSECTION OF

UNIVERSITY DRIVE AND JEAN STREET.

3. CONTRACTOR TO INSTALL TEMPORARY PAVEMENT MARKINGS.

PHASE 5

1. CONTRACTOR IS TO IMPLEMENT VWAPM TTC-1.0 AND TTC-23.1 TO CONSTRUCT THE PROPOSED SIDEWALK, RETAINING WALLS, DRIVEWAY APRONS AND LIGHT POLES.

PHASE 6

- 1. CONTRACTOR IS TO IMPLEMENT VWAPM TTC-28.0 TO CONSTRUCT THE PROPOSED CURB AND GUTTER, SIDEWALK, AND CURB RAMPS AT THE SOUTH WEST CORNER OF THE STRATFORD AVENUE INTERSECTION.
- 2. CONTRACTOR IS TO IMPLEMENT VWAPM TTC-28.0 TO CONSTRUCT THE PROPOSED CURB AND GUTTER, SIDEWALK, AND CURB RAMPS AT THE THREE REMAINING CORNERS OF THE STRATFORD AVENUE INTERSECTION INDIVIDUALLY.
- 3. CONTRACTOR TO ERADICATE CONFLICTING PAVEMENT MARKINGS AND INSTALL TEMPORARY PAVEMENT MARKINGS.
- 4. CONTRACTOR TO RELOCATE EXISTING SIGNAGE.

PHASE 7

- 1. CONTRACTOR IS TO IMPLEMENT VWAPM TTC-23.1 TO CONSTRUCT THE PROPOSED CURB AND RAIN GARDENS BETWEEN THE INTERSECTIONS OF UNIVERSITY DRIVE AND JEAN STREET AND UNIVERSITY DRIVE AND STRATFORD AVENUE
- 2. CONTRACTOR TO ERADICATE CONFLICTING PAVEMENT MARKINGS AND INSTALL TEMPORARY PAVEMENT MARKINGS.
- 3. CONTRACTOR TO INSTALL PROPOSED SIGNAGE.

PHASE 8 (BY CITY, NOT IN CONTRACT)

1. REPAVE ROAD, INSTALL FINAL PAVEMENT MARKINGS 4A-4F.

IOTES:

- 1. WORK WITHIN THE CITY OF FAIRFAX RIGHT OF WAY SHALL COMPLY WITH ALL RIGHT OF WAY PERMIT REQUIREMENTS AND GUIDELINES.
- 2. CONTRACTOR SHALL REMOVE OR ADJUST (AS NEEDED) ALL TEMPORARY TRAFFIC CONTROLS UPON COMPLETION OF EACH PHASE.
- 3. CONTRACTOR SHALL DESIGNATE A PERSON ASSIGNED TO THE PROJECT WHO WILL HAVE THE PRIMARY RESPONSIBILITY FOR IMPLEMENTING THE TMP/SOC. THIS PERSON SHALL COORDINATE WITH THE CITY OF FAIRFAX CONSTRUCTION INSPECTOR FOR THE DURATION OF THE CONSTRUCTION.
- 4. CONTRACTOR SHALL ENSURE THAT ALL PERSONNEL ASSIGNED TO THE PROJECT ARE TRAINED IN TRAFFIC CONTROL TO A LEVEL COMMESURATE WITH THEIR RESPONSIBILITIES IN ACCORDANCE WITH VDOT'S WORK ZONE TRAFFIC CONTROL TRAINING GUIDELINES.
- 5. CONTRACTOR SHALL SCHEDULE ALL PHASES OF CONSTRUCTION IN SUCH A MANNER THAT ANY UNDERGROUND AND OVERHANGING UTILITIES WILL NOT BE INTERRUPTED.



CITY OF FAIRFAX

DEPARTMENT OF PUBLIC WORKS

Transportation Division

10455 Armstrong St. Room 200A Fairfax, VA 22030 Phone: 703-385-7889



© 2018 KIMLEY-HORN AND ASSOCIATES, 11400 Commerce Park Drive Suite 400 Reston, Virginia 20191 Phone: 703-674-1300

Jear

Revisions



Date

	_	
	_	
	_	
	_	
	_	
	_	
	_	
	_	
	_	
	_	
	_	
	_	
DESIGNED BY		
DRAWN BY		
CHECKED BY		

CITY OF FAIRFAX, VIRGINIA DEPARTMENT OF PUBLIC WORKS

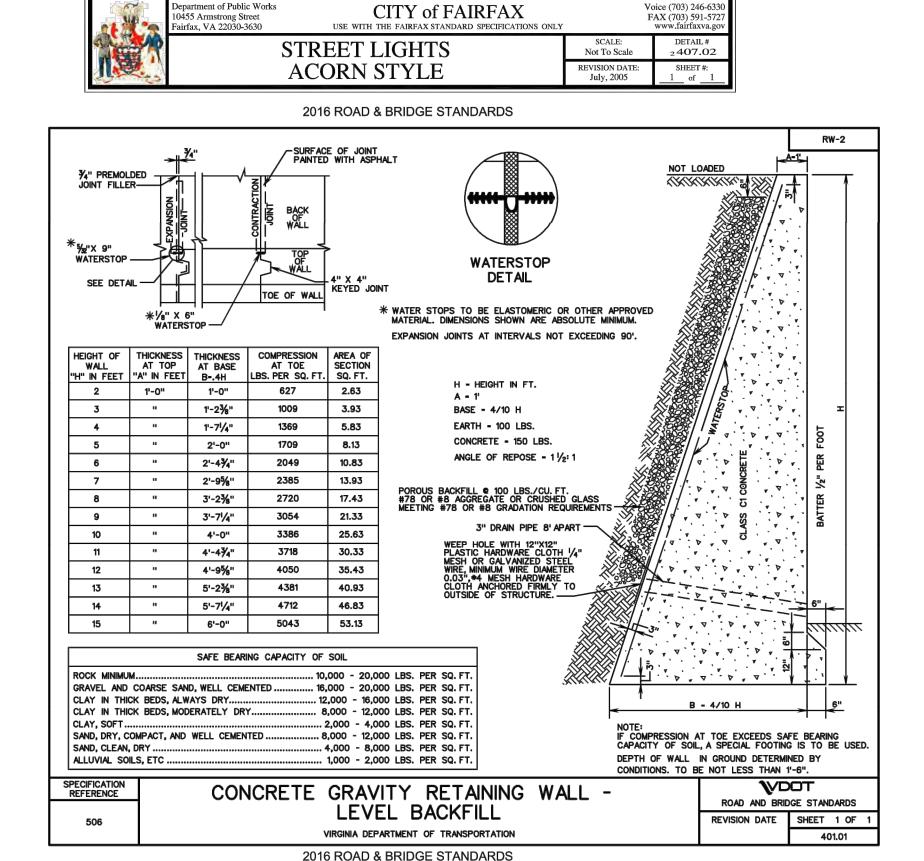
UNIVERSITY DRIVE TRAFFIC CALMING
KENMORE DRIVE TO STRATFORD AVENUE
GENERAL NOTES

UPC # 113121

SCALE

SEE GRAPHIC SCALE SHEET

20



16 1/2"

Cutoff Acorn

These Cutoff luminaire options are a dark-skies friendly

alternative to various fixture styles.

— 2 1/2" × 5" HAND HOLE

- 2 1/2" DIA. CABLE EXIT

MAINTENANCE OF TRAFFIC

Page 6H-8

Typical Traffic Control

Work Beyond the Shoulder Operation

(Figure TTC-1.1)

NOTES

Guidance:

1. The minimum distance between the sign and work vehicle should be 1300'-1500' on Limited Access highways, and on all other roadways 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limited is 45 mph or less.

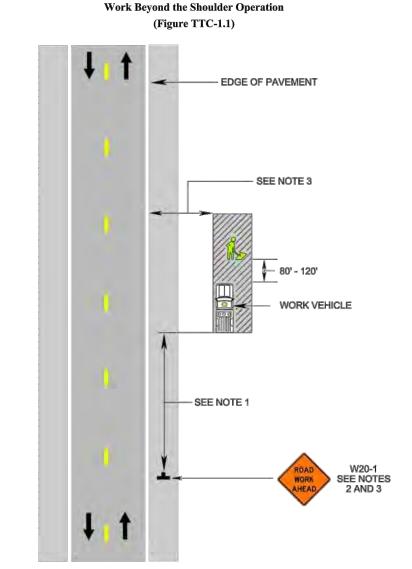
- The ROAD WORK AHEAD (W20-1) sign may be replaced with other appropriate signs such as the SHOULDER WORK (W21-5) sign. The SHOULDER WORK sign may be used for work adjacent to the shoulder.
- 3. The ROAD WORK AHEAD sign may be omitted where the work space is behind a barrier, more than 4 feet behind vertical curb (Standard CG-2 and CG-6) on urban roadways, or outside of the clear zone for all other roadways. For clear zone values see Page A-4 of Appendix A.
- For short-term, short duration or mobile operations, all signs and channelizing devices may be eliminated if a vehicle with activated high-intensity amber rotating, flashing, or oscillating lights is used.
- Standard:
 5. Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity amber rotating, flashing, or oscillating lights. Vehicle hazard warning signals can be used to supplement
- high-intensity amber rotating, flashing, or oscillating lights.

 6. If the work space is in the median of a divided highway, an advance warning sign shall also be

placed on the left side of the directional roadway.

1: Revision 1 – 4/1/2015

Page 6H-9



Page 6H-52 Ap

Typical Traffic Control

Lane Closure on a Two-Lane Roadway Using Flaggers
(Figure TTC-23.1)

NOTES

- Guidance:
 1. Sign spacing distance should be 350'-500' where the posted speed limit is 45 mph or less, and 500'-800' where the posted speed limit is greater than 45 mph.
- 2. Care should be exercised when establishing the limits of the work zone to insure maximum possible sight distance in advance of the flagger station and transition, based on the posted speed limit and at least equal to or greater than the values in Table 6H-3. Generally speaking, motorists should have a clear line of sight from the graphic flagger symbol sign to the flagger.
- 3. Where Right-of-Way or geometric conditions prevent the use of 48" x 48" signs, 36" x 36" signs may be used.
- Standard:
 4. Flagging stations shall be located far enough in advance of the work space to permit approaching traffic to reduce speed and/or stop before passing the work space and allow sufficient distance for
- 5. All flaggers shall be state certified and have their certification card in their possession when performing flagging duties (see Section 6E.01, Qualifications for Flaggers).
- 6. Cone spacing shall be based on the posted speed and the values in Table 6H-4 on Page 6H-6.
 7. A shadow vehicle with at least one high intensity amber rotating, flashing, or oscillating light shall be parked 80'-120' in advance of the first work crew.
- Option:

 8. A supplemental flagger may be required in this area to give advance warning of the operation ahead by slowing approaching traffic prior to reaching the flagger station or queued traffic.
- 9. If the queue of traffic reaches the BE PREPARED TO STOP (W3-4) sign then the signs, and if used the portable temporary rumble strips (PTRS), should be readjusted at greater distances.

10. When a highway-rail crossing exists within or upstream of the transition area and it is anticipated that queues resulting from the lane closure might extend through the highway-rail grade crossing, the temporary traffic control zone should be extended so that the transition area precedes the highway-rail crossing (see Figure TTC-56 for additional information on highway-rail crossings).

- 11. At night, flagger stations shall be illuminated, except in emergencies (see Section 6E.08).
 Option:
 12. Cones may be eliminated when using a pilot vehicle operation or when the total roadway width is 20
- feet or less.13. For low-volume situations with short work zones on straight roadways where the flagger is visible to road users approaching from both directions, a single flagger, positioned to be visible to road users approaching from both directions, may be used (see Chapter 6E).

14. When approved for use, three portable temporary rumble (PTRS) strips shall be installed across the entire travel lane adjacent to the BE PREPARED TO STOP (W3-4) sign. The portable temporary rumble strips shall be monitored and adjusted as necessary during the work shift to ensure proper placement on the roadway. When the PTRS are installed, the RUMBLE STRIPS AHEAD (W20-V26) sign shall also be utilized.

Posted Speed

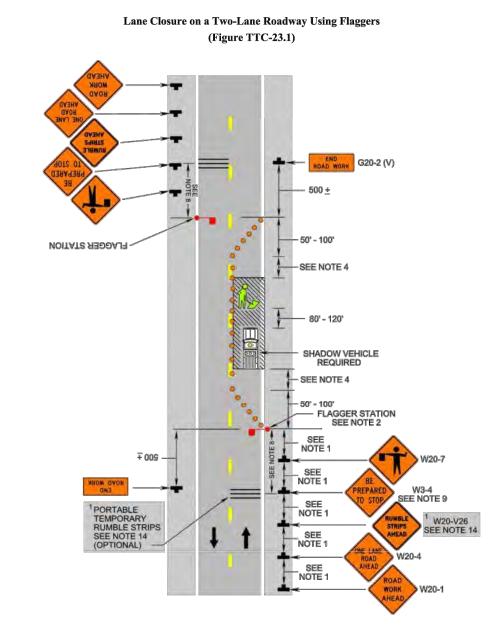
O - 35 mph
PTRS Spacing (Center to Center)

5 Feet

8 Feet

1: Revision 1 - 4/1/2015

April 2015



Page 6H-62 April 2015

Typical Traffic Control

Lane Closure Operation in an Intersection
(Figure TTC-28.1)

NOTES

- The control of traffic through the intersection in order of preference should be:
 a. Obtain the services of law enforcement personnel.
- b. Detour the effective routes to other roads and streets as approved and directed by the Regional Traffic Engineer.
- c. Place a state certified flagger on each leg of the intersection controlling a single lane of traffic.

 Appropriate signing as shown should be used for law enforcement and flagging operations. For detour
- Sign spacing distance should be 350'-500' where the posted speed limit is 45 mph or less, 500'-800' where the posted speed limit is greater than 45 mph.

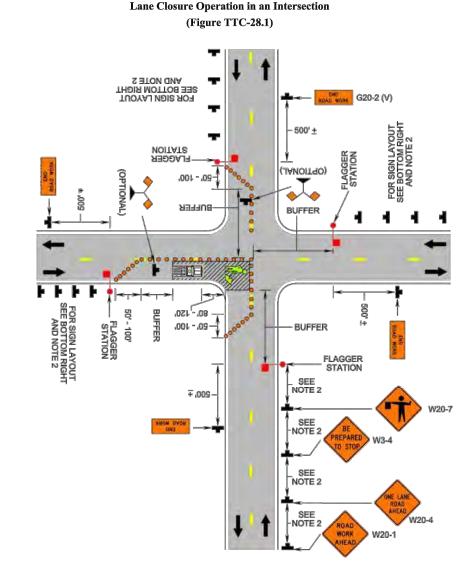
3. Channelizing device spacing shall be on 20' centers or less.

- 4. If room permits, a shadow vehicle with at least one rotating amber light or high intensity amber flashing or oscilllating light should be parked 80'-120' in advance of the first work crew.

 Standard:
- 5. For emergency situations (any non-planned operation) of 30 minutes or less duration, two rotating amber lights or high intensity amber mashing or oscillating lights mounted on the vehicle and visible for 360° shall be required in addition to the channelizing devices shown around the vehicle. Also, vehicle hazard warning signals shall be used.
- If the work space extends across a crosswalk, the crosswalk should be closed using the information and devices shown in Figure TTC-36.
- 7. Turns can be prohibited as required by vehicular traffic conditions. Unless the streets are wide, it might be physically impossible to make certain turns, especially for large vehicles.

1: Revision 1 - 4/1/2015

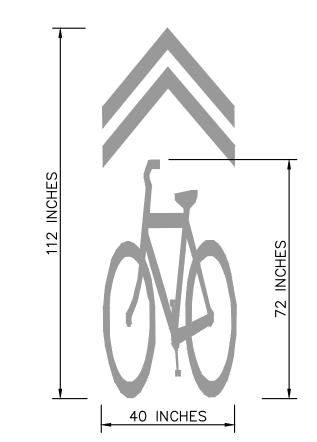
April 2015 Page 6H-63



SIGN SCHEDULE

SIGN ASSEMBLY COMPONENTS PANEL SIZE QTY. TEXT SIGN PROP. SIGN REMARKS MUTCD NO. TEXT **ASSEMBLY** STRUCTURE ST'D. NO(s). ST'D. R1 - 2SPD-5, TYPE A FLUORESCENT 2,3,4,5 102 OM-3RYELLOW-GREEN NO 103 R7-1 6,7,12, PARKING SPD-5, TIME TYPE A 103 R7-1 8,9,10, PARKING SPD-5, TYPE A W11-224" 24" 104 11,12 **FLUORESCENT** YELLOW-GREEN TYPE A W16-7P 24" 12"

SHARED LANE MARKING DETAIL



REFERENCE MUTCD 2009 EDITION FOR PLACEMENT GUIDANCE LANE MARKING SHALL BE TYPE B, CLASS 1, WHITE PAVEMENT MARKING

CITY OF FAIRFAX

DEPARTMENT OF PUBLIC WORKS

Transportation Division 10455 Armstrong St. Room 200A

> Fairfax, VA 22030 Phone: 703-385-7889

Kimley» Horn

© 2018 KIMLEY-HORN AND ASSOCIATES, INC. 11400 Commerce Park Drive Suite 400 Reston, Virginia 20191 Phone: 703-674-1300 Fax: 703-674-1350

Seal

Revisions



Date

DESIGNED BY
DRAWN BY
CHECKED BY

CITY OF FAIRFAX, VIRGINIA DEPARTMENT OF PUBLIC WORKS

UNIVERSITY DRIVE TRAFFIC CALMING
KENMORE DRIVE TO STRATFORD AVENUE
GENERAL NOTES

UPC # 113121

SCALE SEE GRAPHIC SCALE SHEET

20

RIGHT OF WAY DATA

				EASEME	NT AREA
PARCEL NO.	PARCEL ID	LANDOWNER	SHEET	PERMANENT	TEMPORARY
				SQUARE FEET	SQUARE FEET
1	57-2-09-001	TRUSTEES OF THE FAIRFAX METHODIST CHURCH	3F	528	149
2	57-2-09-002	JOHN L. FIGEL	3F	300	375
3	57-2-09-003	LLOYD TODD WRIGHT AND JENNIFER LYNNE WRIGHT	3F		472
4	57-2-09-004	VINCENT MAI	3E, 3F		570
5	57-2-09-005	MAIRA E. RUBIO SANCHEZ & NELSON J. JACOME	3E		589
6	57-2-09-006	TIFFANY CHANG	3E		517
7	57-2-09-007	ROBERT A. KEMP	3E		156
8	57-2-09-008	NEUSA MEDEIROS	3E		639
9	57-2-09-009	MICHELLE MINHTU PHAM & AMY CHAUHANG TRINH	3D, 3E	381	426
		TOTAL		1209	3893



DEPARTMENT OF PUBLIC WORKS

Transportation Division 10455 Armstrong St. Room 200A Fairfax, VA 22030

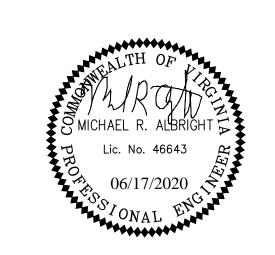
Phone: 703-385-7889



© 2018 KIMLEY-HORN AND ASSOCIATES, INC.

11400 Commerce Park Drive
Suite 400
Reston, Virginia
20191
Phone: 703-674-1300
Fax: 703-674-1350

Sed



Revisions	Date
	_
	_
	_
-	
	_
	_
DESIGNED BY	
DRAWN BY	
CHECKED BY	

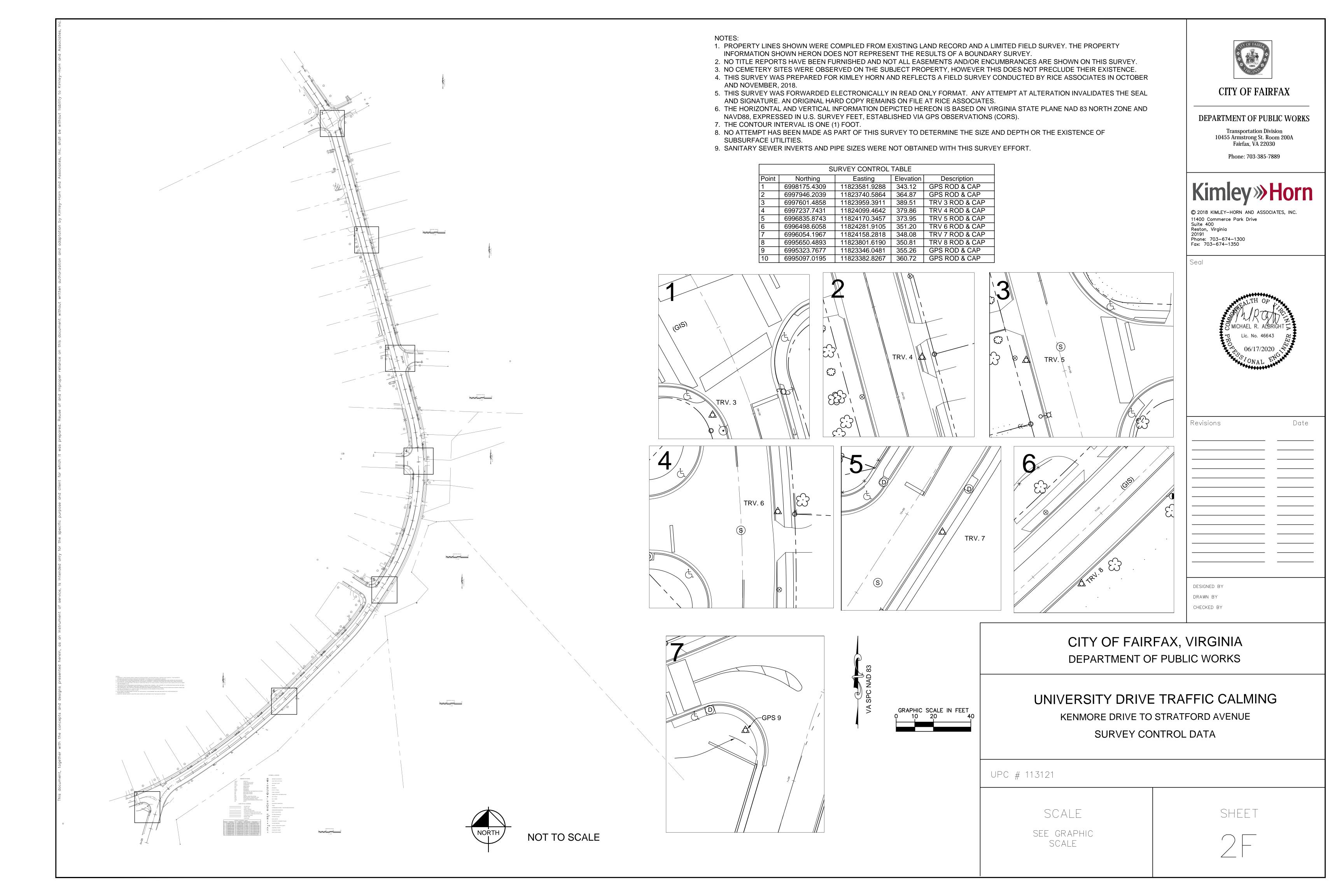
CITY OF FAIRFAX, VIRGINIA DEPARTMENT OF PUBLIC WORKS

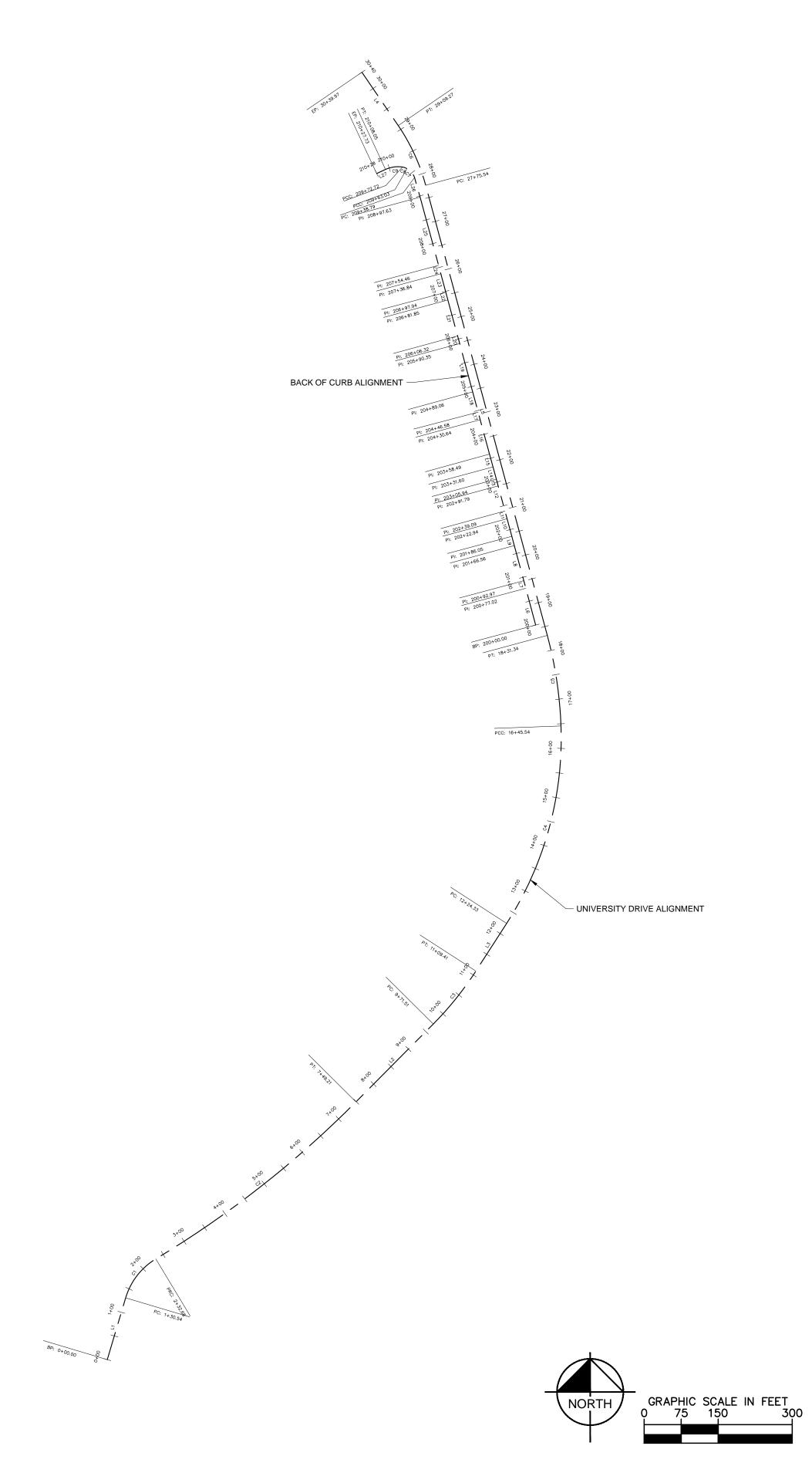
UNIVERSITY DRIVE TRAFFIC CALMING
KENMORE DRIVE TO STRATFORD AVENUE
RIGHT OF WAY DATA

UPC # 113121

SCALE SEE GRAPHIC SCALE SHEET

2 E







		LINE	TABLE	
LINE	LENGTH	BEARING	START STATION	END STATION
L1	130.54	N16°34'56.97"E	0+00.00	1+30.54
L2	222.29	N44°48'39.03"E	7+49.21	9+71.51
L3	114.93	N32°51'27.18"E	11+09.41	12+24.33
L4	130.70	N34°16'47.95"W	29+09.27	30+39.97
L5	944.21	N15°07'29.19"W	18+31.34	27+75.54

			CURVE TABL	_E		
CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C1	138.00'	102.14	N37°47'09"E	99.82	42°24'23"	53.54'
C2	2087.40'	516.53	N51°54'00"E	515.22	14°10'41"	259.59'
С3	661.00'	137.90'	N38°50'03"E	137.65	11 ° 57'12"	69.20'
C4	691.00'	421.21	N15°23'41"E	414.72	34°55'32"	217.38'
C5	815.30'	185.79'	N8 ° 35'47"W	185.39	13°03'24"	93.30'
C6	400.00'	133.73'	N24°42'09"W	133.11'	19 ° 09'19"	67.49'

BACK OF CURB ALIGNMENT

		LINE -	TABLE	
LINE	LENGTH	BEARING	START STATION	END STATION
L6	77.02	N14°57'03.64"W	200+00.00	200+77.02
L7	15.95	N15°01'43.49"W	200+77.02	200+92.97
L8	73.59	N15°09'54.45"W	200+92.97	201+66.56
L9	19.49	N14°54'11.41"W	201+66.56	201+86.05
L10	36.89	N15°12'50.37"W	201+86.05	202+22.94
L11	16.16	N15°15'18.09"W	202+22.94	202+39.09
L12	52.70	N15°10'23.62"W	202+39.09	202+91.79
L13	14.15	N15°05'16.52"W	202+91.79	203+05.94
L14	25.66	N15°03'20.49"W	203+05.94	203+31.60
L15	26.89	N15°22'52.29"W	203+31.60	203+58.49
L16	72.15	N15°10'51.62"W	203+58.49	204+30.64
L17	15.94	N14°42'48.32"W	204+30.64	204+46.58
L18	42.48	N15°18'16.24"W	204+46.58	204+89.06
L19	101.29	N15°02'28.96"W	204+89.06	205+90.35
L20	15.97	N15°11'55.28"W	205+90.35	206+06.32
L21	75.53	N15°10'59.65"W	206+06.32	206+81.85
L22	16.09	N14*55'31.58"W	206+81.85	206+97.94
L23	38.90	N14°59'27.42"W	206+97.94	207+36.84
L24	17.62	N15°01'26.44"W	207+36.84	207+54.46
L25	143.17	N15°11'14.07"W	207+54.46	208+97.63
L26	41.16	N15°45'32.75"W	208+97.63	209+38.79
L27	19.68	S65*00'15.79"W	210+08.05	210+27.73

OF FAIRIAN 1805	
CITY OF FAIRFAX	

DEPARTMENT OF PUBLIC WORKS

Transportation Division 10455 Armstrong St. Room 200A Fairfax, VA 22030

Phone: 703-385-7889



© 2018 KIMLEY—HORN AND ASSOCIATES, INC. 11400 Commerce Park Drive Suite 400 Reston, Virginia 20191 Phone: 703-674-1300 Fax: 703-674-1350

Seal



CURVE TABLE

CURVE RADIUS LENGTH CHORD BEARING CHORD DELTA TANGENT

C7 33.19' 24.23' N40°23'38"W 23.70' 41°50'04" 12.69'

C8 28.53' 9.69' N70°13'22"W 9.65' 19°27'50" 4.89'

C9 59.67' 35.33' S81°58'07"W 34.82' 33°55'42" 18.20'

	_	
-		
	_	
	_	
DESIGNED BY		
DRAWN BY		
CHECKED BY		

CITY OF FAIRFAX, VIRGINIA DEPARTMENT OF PUBLIC WORKS

UNIVERSITY DRIVE TRAFFIC CALMING

KENMORE DRIVE TO STRATFORD AVENUE
CONSTRUCTION ALIGNMENT DATA

UPC # 113121

SCALE SEE GRAPHIC SCALE SHEET

20

NOTE: THE TOTAL TREATMENT AREA (0.63 AC) FOR THE PROPOSED BMP'S IS GREATER THAN THE SITE DISTURBED AREA OF 0.45 AC DUE TO OFF-SITE IMPERVIOUS FLOW WHICH IS CURRENTLY UNTREATED NOR DETAINED IN EXISTING SWM/BMP FACILITIES

TP Load per acre

(lb/acre/yr)

1.66

TP Load per acre

(lb/acre/yr)

Load per acre

(lb/acre/yr)

1.59

DEQ Virginia Runoff Reduction Method Re-Development Compliance Spreadsheet - Version 3.0

BMP Design Specifications List: 2013 Draft Stds & Specs

Site Summary - Linear Development Project***

Project Title: University Drive Traffic Calming Date: 43859

Total Disturbed Acreage:

Site Land Cover Summary

Pre-ReDevelopment Land Cover (acres)

	A soils	B Soils	C Soils	D Soils	Totals	% of Total
Forest/Open (acres)	0.00	0.00	0.00	0.00	0.00	0
Managed Turf (acres)	0.00	0.00	0.00	0.28	0.28	44
Impervious Cover (acres)	0.00	0.00	0.00	0.35	0.35	56
					0.03	100

Post-ReDevelopment Land Cover (acres)

	Asoils	B Soils	C Soils	D Soils	Totals	% of Total
Forest/Open (acres)	0.00	0.00	0.00	0.00	0.00	0
Managed Turf (acres)	0.00	0.00	0.00	0.20	0.20	32
Impervious Cover (acres)	0.00	0.00	0.00	0.43	0.43	68
					0.63	100

Site Tv and Land Cover Nutrient Loads

	Final Post-Development (Post-ReDevelopment & New Impervious)	Post- ReDevelopment	Post- Development (New Impervious)	Adjusted Pre- ReDevelopment
Site Rv	0.73	0.70	0.95	0.70
Treatment Volume (ft ³)	1,664	1,388	276	1,388
TP Load (lb/yr)	1.05	0.87	0.17	0.87

otal TP Load Reduction Required (lb/yr)	0.31	N/A***	N/A***

	This is a timear development project	
	Final Post-Development Load (Post-ReDevelopment & New Impervious)	Pre- ReDevelopment
TN Load (lb/yr)	7.48	6.57

Site Compliance Summary - ***Linear Development Project

200/	Maximum % Reduction Required Below
20%	Pre-ReDevelopment Load

Total Runoff Volume Reduction (ft ³)	593	7
Total TP Load Reduction Achieved (lb/yr)	0.51	٦
Total TN Load Reduction Achieved (lb/yr)	4.26	٦
Remaining Post Development TP Load (lb/yr)	0.53	
Remaining TP Load Reduction (lb/yr) Required	0.00	7

** TARGET TP REDUCTION EXCEEDED BY 0.2 LB/YEAR **

Drainage Area Summary

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	Total
Forest/Open (acres)	0.00	0.00	0.00	0.00	0.00	0.00
Managed Turf (acres)	0,20	0.00	0.00	0.00	0.00	0.20
Impervious Cover (acres)	0.43	0.00	0.00	0.00	0.00	0.43
Total Area (acres)	0.63	0,00	0.00	0.00	0.00	0.63

Drainage Area Compliance Summary

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	Total
TP Load Reduced (lb/yr)	0.51	0.00	0.00	0.00	0.00	0.51
TN Load Reduced (lb/vr)	4.26	0.00	0.00	0.00	0.00	4.26

Drainage Area A Summary

Land Cover Summary

	A Soils	B Soils	C Soils	D Soils	Total	% of Total
Forest/Open (acres)	0.00	0.00	0.00	0.00	0.00	0
Managed Turf (acres)	0.00	0.00	0.00	0.20	0.20	32
Impervious Cover (acres)	0.00	0.00	0.00	0.43	0.43	68
	•				0.62	

BMP Selections

Practice	Managed Turf Credit Area (acres)	Impervious Cover Credit Area (acres)	BMP Treatment Volume (ft³)	TP Load from Upstream Practices (lbs)	Untreated TP Load to Practice (lbs)	TP Removed (lb/yr)	TP Remaining (lb/yr)	Downstream Treatmen to be Employed
2.i. To Stormwater Planter, Urban Bioretention (Spec #9, Appendix A)		0.43	1,482.86	0.00	0.93	0.51	0,42	

Total Impervious Cover Treated (acres)	0.43
Total Turf Area Treated (acres)	0.00
Total TP Load Reduction Achieved in D.A. (lb/yr)	0.51
Total TN Load Reduction Achieved in D.A.	4.26

Runoff Volume and CN Calculations

	1-year storm	2-year storm	10-year storm	
Target Rainfall Event (in)	2.60	3.14	4.82	

Drainage Areas	RV & CN	Drainage Area A	Drainage Area B	Drainage Area C	Drainage Area D	Drainage Area E
CN		92	0	0	0	0
RR (ft³)		593	0	0	0	0
	RV we RR (ws-in)	1.79	0.00	0.00	0.00	0.00
1-year return period	RV w RR (ws-in)	1.53	0.00	0.00	0.00	0.00
	CN adjusted	89	0	0	0	0
	RV wo RR (ws-in)	2.29	0.00	0.00	0.00	0.00
2-year return period	RV w RR (ws-in)	2.03	0.00	0.00	0.00	0.00
	CN adjusted	89	0	0	0	0
	RV wo RR (ws-in)	3.91	0.00	0.00	0.00	0.00
10-year return period	RV w RR (ws-in)	3.65	0.00	0.00	0.00	0.00
	CN adjusted	89	0	0	0	0

COMPLIANCE WITH THE WATER QUALITY DESIGN CRITERIA IS DETERMINED UTILIZING THE VIRGINIA RUNOFF REDUCTION METHOD. MICRO-BIORETENTION IS THE SELECTED BMP TO REDUCE POLLUTANT LOADS AND/OR RUNOFF VOLUME. THE PEAK DISCHARGE REQUIREMENTS ARE DETERMINED IN ACCORDANCE WITH THE VDOT DRAINAGE MANUAL.

THE MAXIMUM PEAK FLOW RATE IS DETERMINED FROM THE ENERGY BALANCE EQUATION IN THE VDOT DRAINAGE MANUAL. THE MAXIMUM PEAK FLOW RATE FROM THE 1-YR 24 HOUR STORM IN THE POST DEVELOPMENT CONDITION IS 1.65 CFS.

HYDRAFLOW IS USED TO DETERMINE THE PROPOSED SITE RUNOFF TREATED BY THE RAIN GARDENS. THE PROPOSED SITE RUNOFF IS 1.62 CFS, MEETING THE MAXIMUM PEAK FLOW RATE REQUIREMENT.

$$Q_{\text{Developed}} = \text{I.F.} \times \left(\frac{Q_{\text{Pre-Developed}} \times \text{RV}_{\text{Pre-Developed}}}{\text{RV}_{\text{Developed}}} \right)$$

$$Q_{\text{Developed}} = .90 \left(\frac{1.840cfs \times 3829cuft}{3829cuft} \right)$$

$$Q_{Developed} = 1.65 \, cfs$$

Where:

I.F. (Improvement Factor) = 0.8 for sites > 1 acre LDA or 0.9 for sites ≤ 1 acre LDA Q_{Developed} = the allowable peak flow rate of runoff from the developed site for the 1-yr

RV_{Developed} = the volume of runoff from the site in the developed condition for the 1-yr

Q_{Pre-Developed} = the peak flow rate of runoff from the site in the pre-developed condition for the 1-yr 24-hour storm. RV_{Pre-Developed} = the volume of runoff from the site in pre-developed condition for the 1-

yr 24-hour storm. QForest = the peak flow rate of runoff from the site in a forested condition for the 1-yr

RVForest = the volume of runoff from the site in a forested condition for the 1-yr 24-

Hydrograph Summary Report Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	1.840	2	716	3,829				Existing Total Site Drainage
2	SCS Runoff	1.840	2	716	3,829				Proposed Site Drainage - No Treatme
3	SCS Runoff	1.622	2	716	3,307		1 + 10 + 10		Proposed Site Drainage - Treated

Hydrograph Report

Hydraflow Hydrographs Extension for Autodeski® CIVII 3D® 2019 by Autodesk, Inc. v2020 Thursday, 01 / 30 / 2020 Hyd. No. 1

Existing Total Site Drainage

---- Hyd No. 1

Q (cfs)

Existing Total Oile Di	amage		
Hydrograph type	= SCS Runoff	Peak discharge	= 1.840 cfs
Storm frequency	= 1 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 3,829 cuft
Drainage area	= 0.630 ac	Curve number	= 92
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 2.60 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

Existing Total Site Drainage

Hyd. No. 1 -- 1 Year

120 240 360 480 600 720 840 960 1080 1200 1320

URBAN BIORETENTION SIZING

MINIMUM SIZING REQUIREMENT WAS DETERMINED PER VA DCR STORMWATER DESIGN SPECIFICATION 9, APPENDIX 9-A

 $Tv_{BMP} = [(1)(R_V)(A)/12]$

 $Tv_{BMP} = [(1)(1664)(.63)/12]$

PROPOSED BMP's MEET THE MINIMUM SIZING REQUIREMENT

 $Tv_{BMP} = 87.36 \text{ cuft}$

 $\frac{87.36ft^3}{4} = 21.84ft^3 \ per \ BMP$



CITY OF FAIRFAX

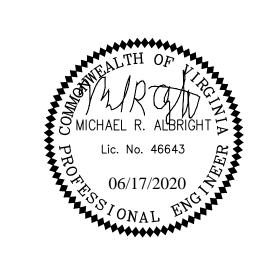
DEPARTMENT OF PUBLIC WORKS

Transportation Division 10455 Armstrong St. Room 200A Fairfax, VA 22030

Phone: 703-385-7889

© 2018 KIMLEY-HORN AND ASSOCIATES, INC. 11400 Commerce Park Drive Suite 400 Reston, Virginia 20191 Phone: 703-674-1300 Fax: 703-674-1350

CHECKED BY



Revisions	Date
	
	
	
	<u> </u>
	
DESIGNED BY	
DRAWN BY	

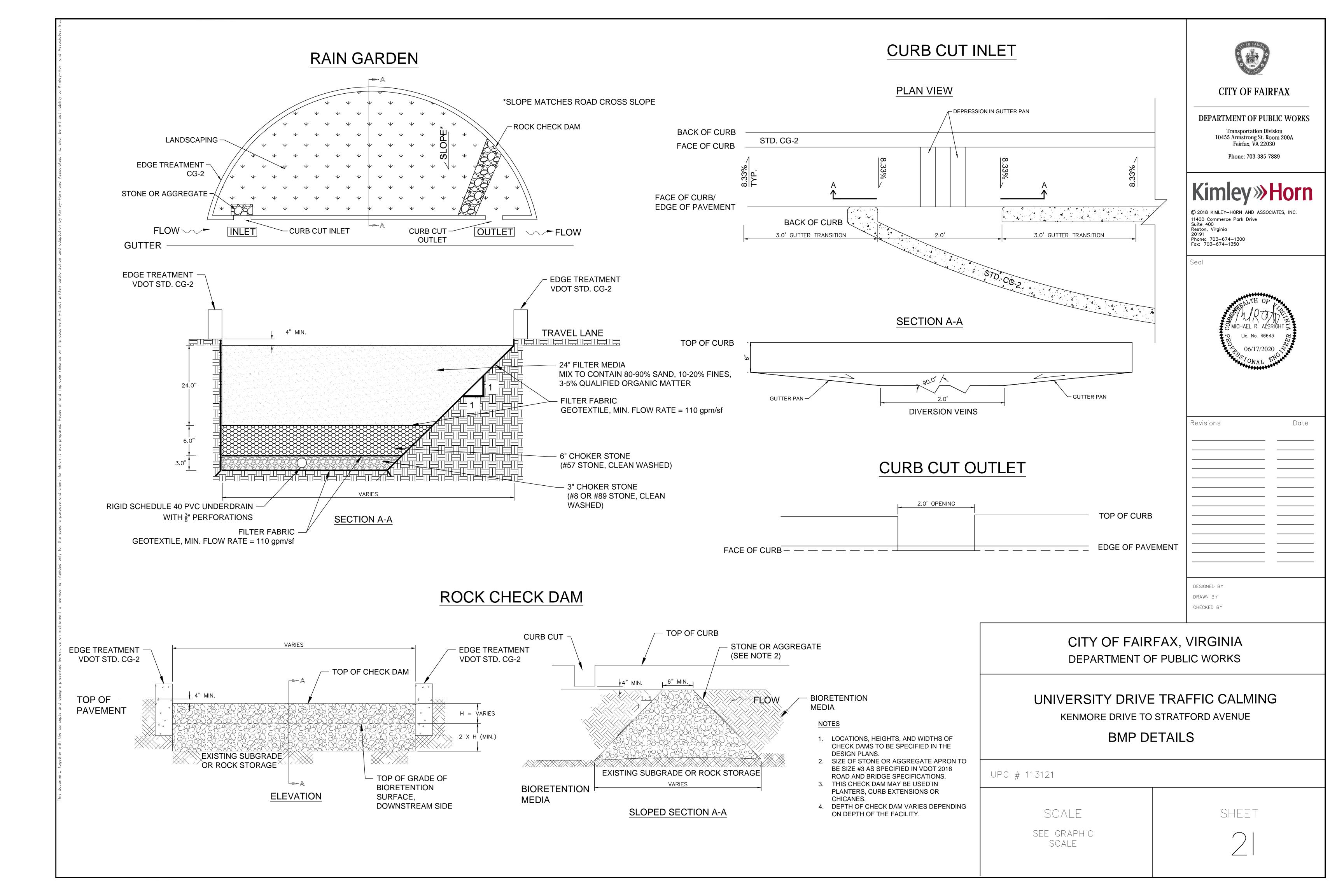
CITY OF FAIRFAX, VIRGINIA DEPARTMENT OF PUBLIC WORKS

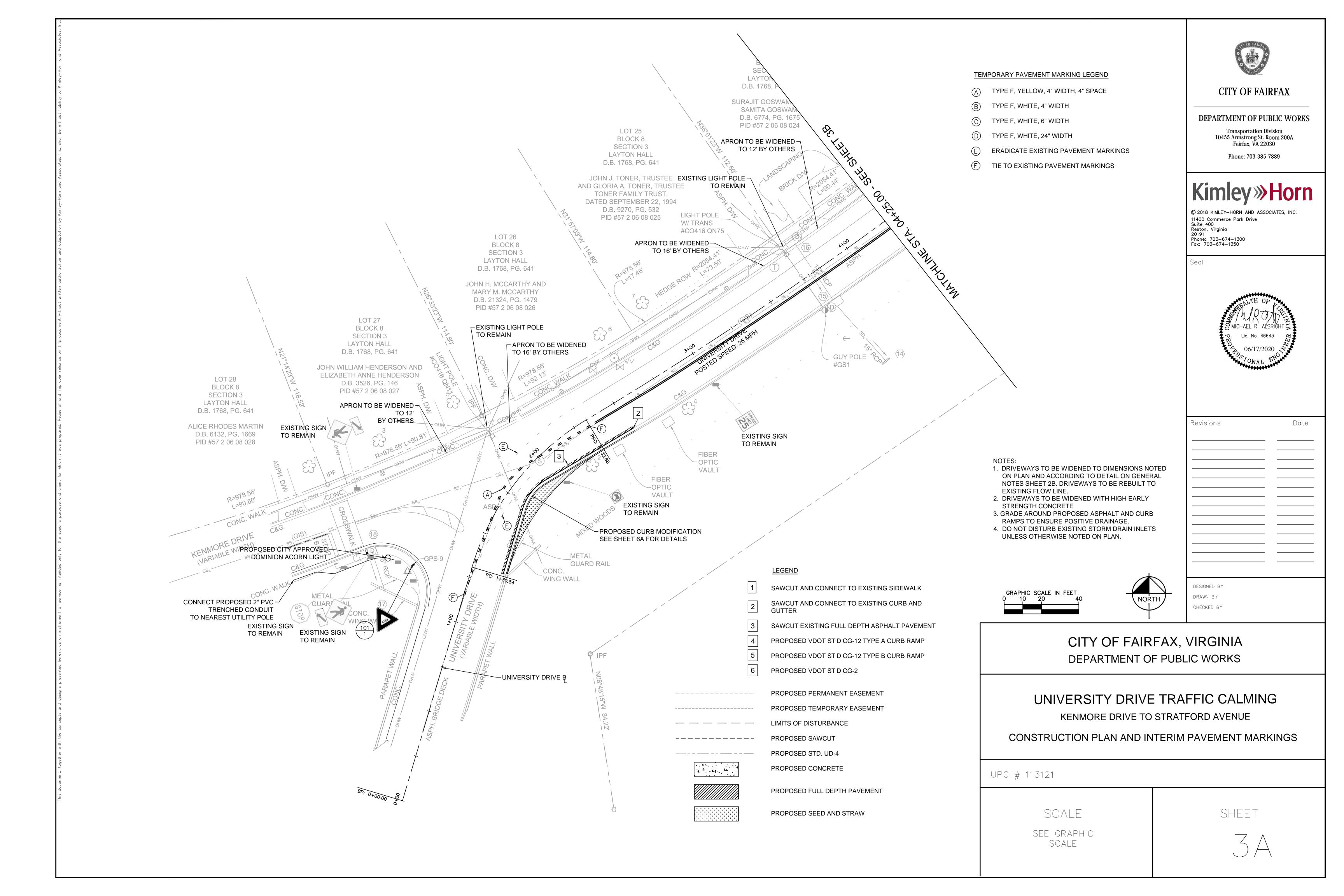
UNIVERSITY DRIVE TRAFFIC CALMING KENMORE DRIVE TO STRATFORD AVENUE BMP CALCULATIONS

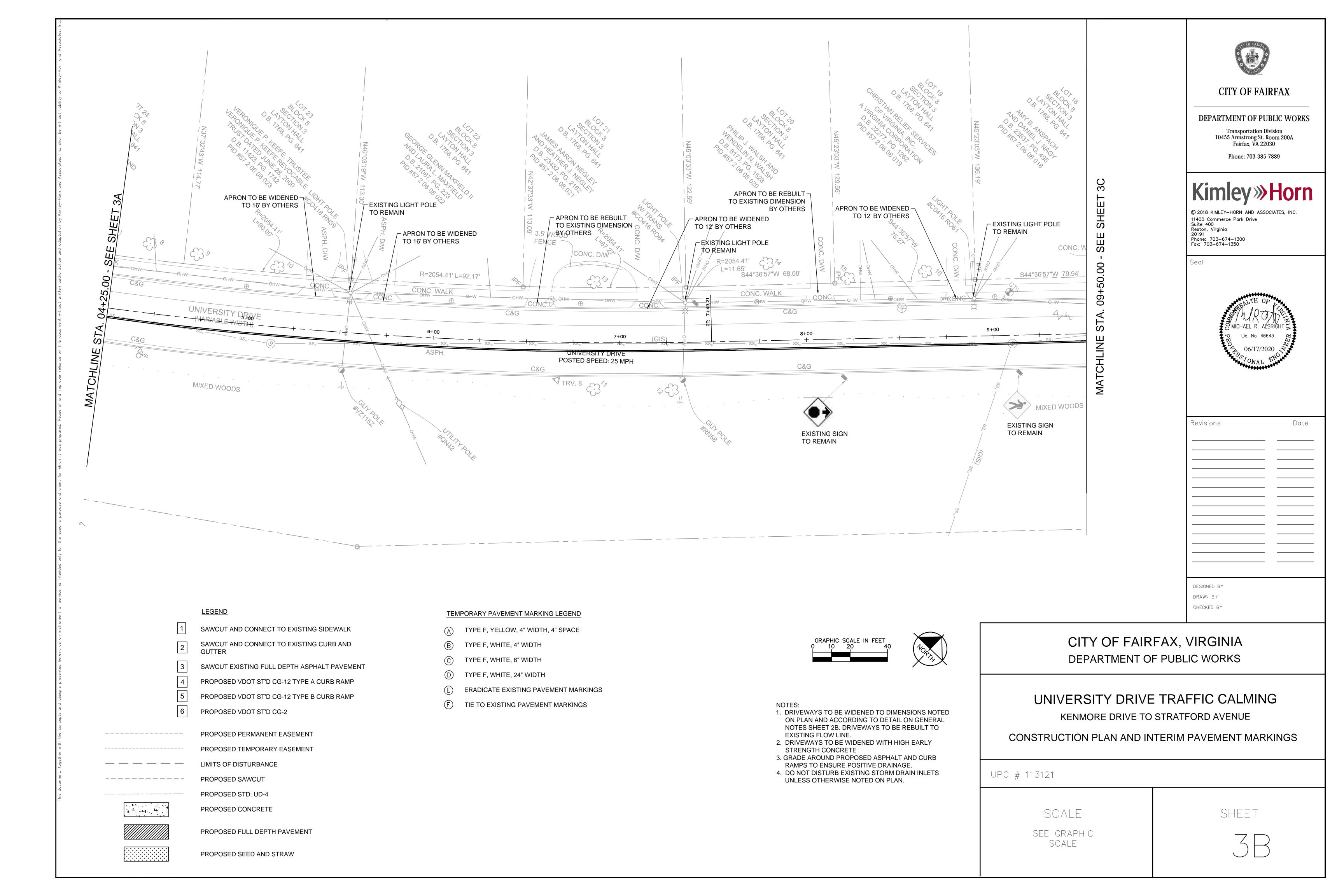
UPC # 113121

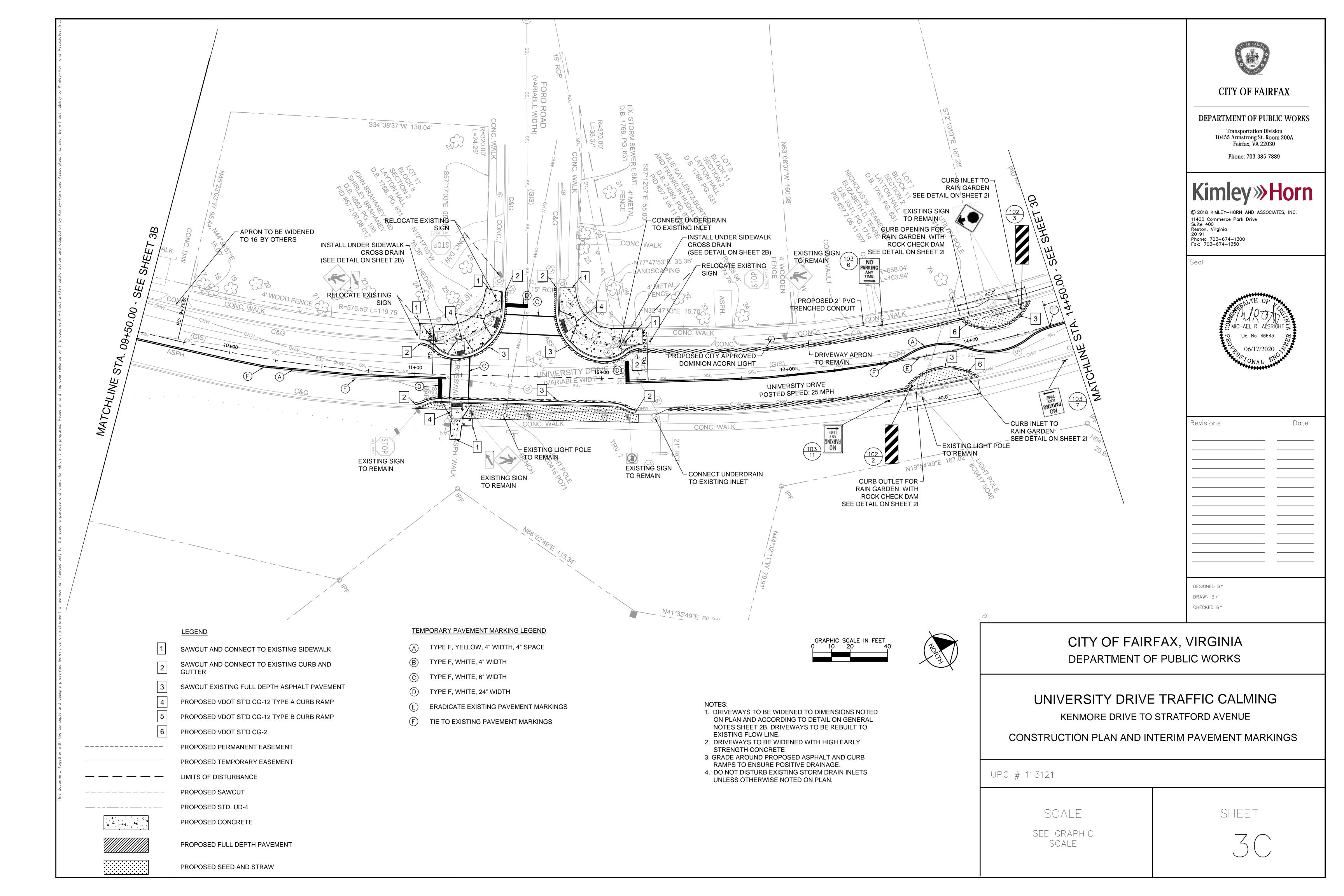
Q (cfs)

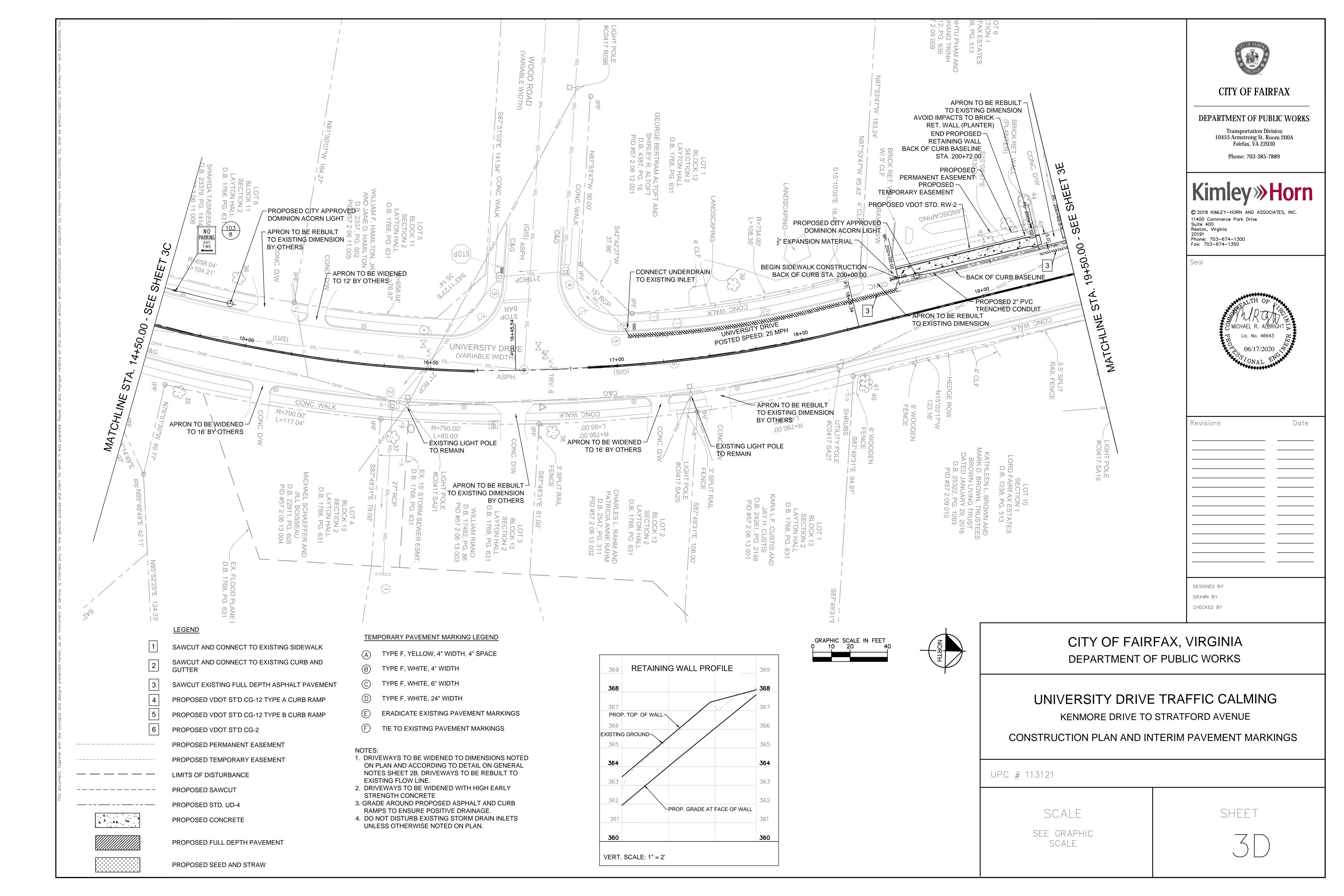
SCALE SEE GRAPHIC SCALE

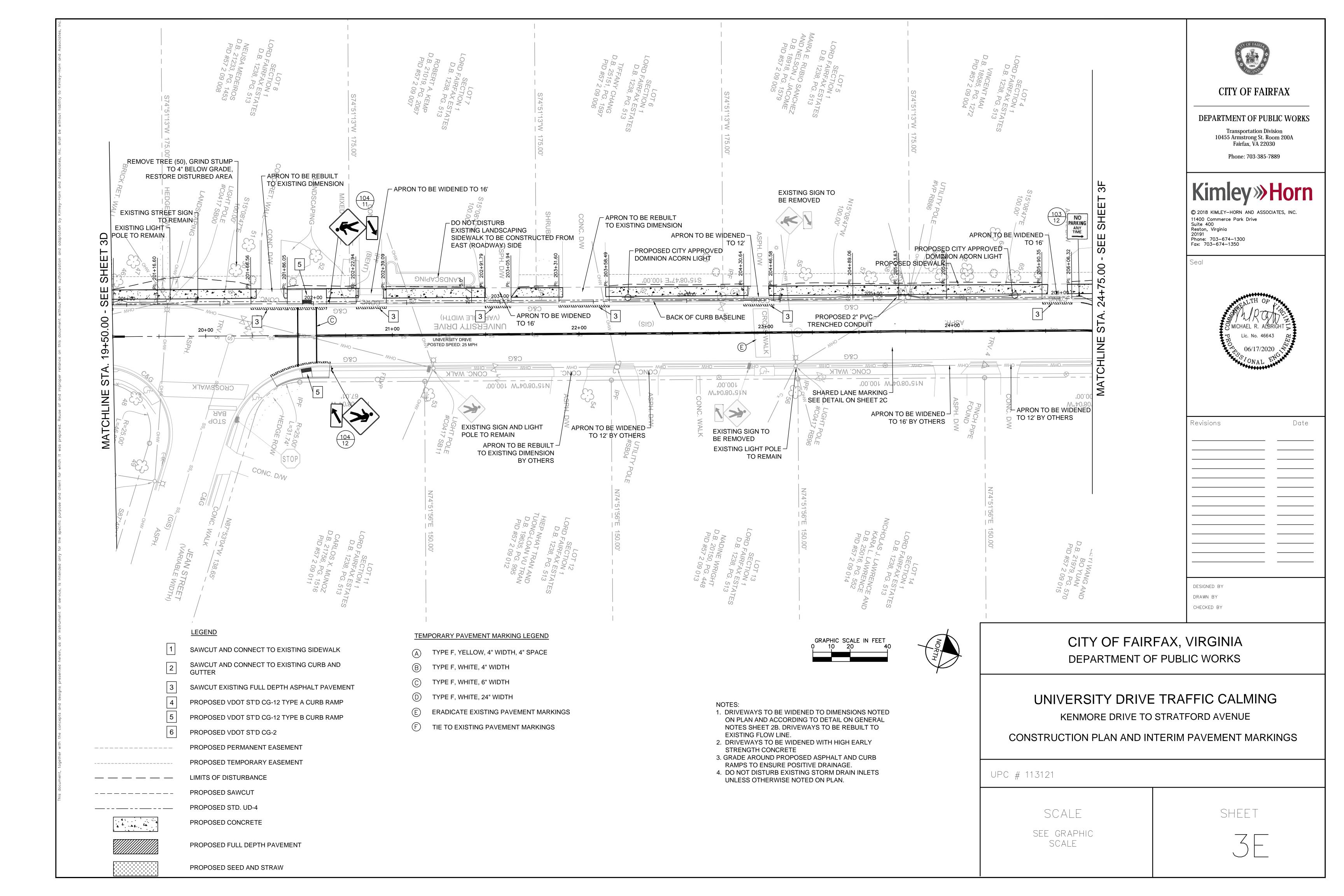


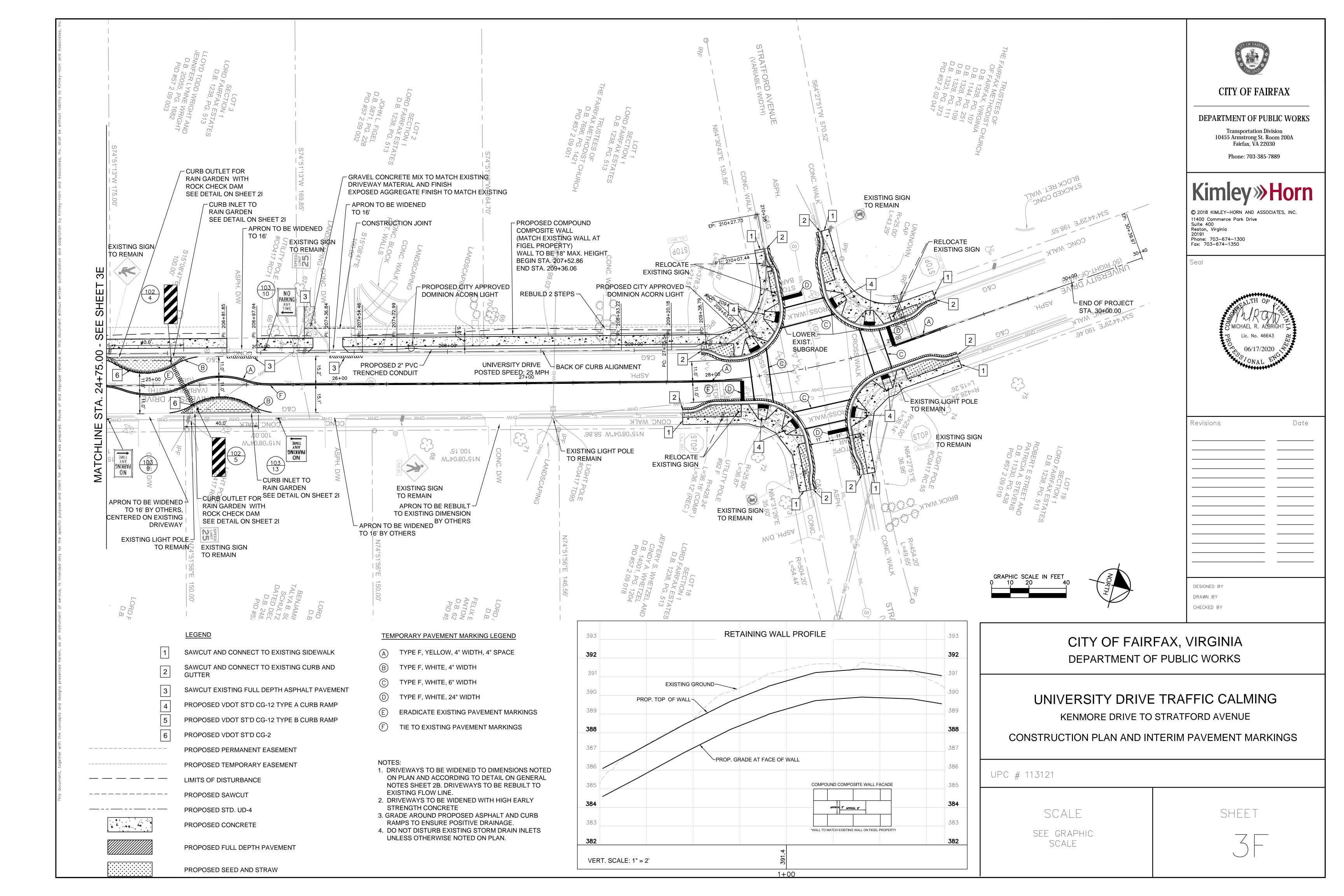


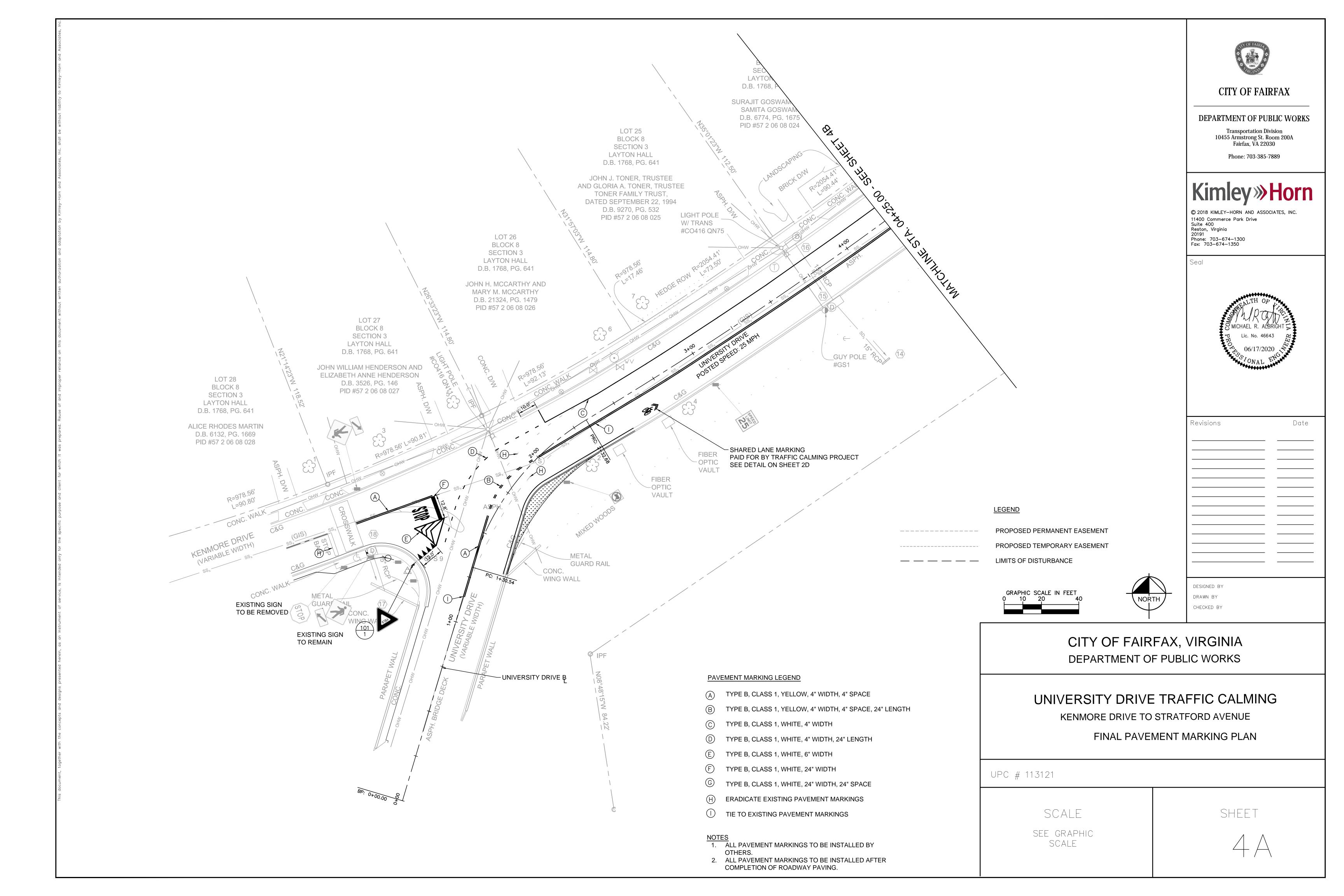


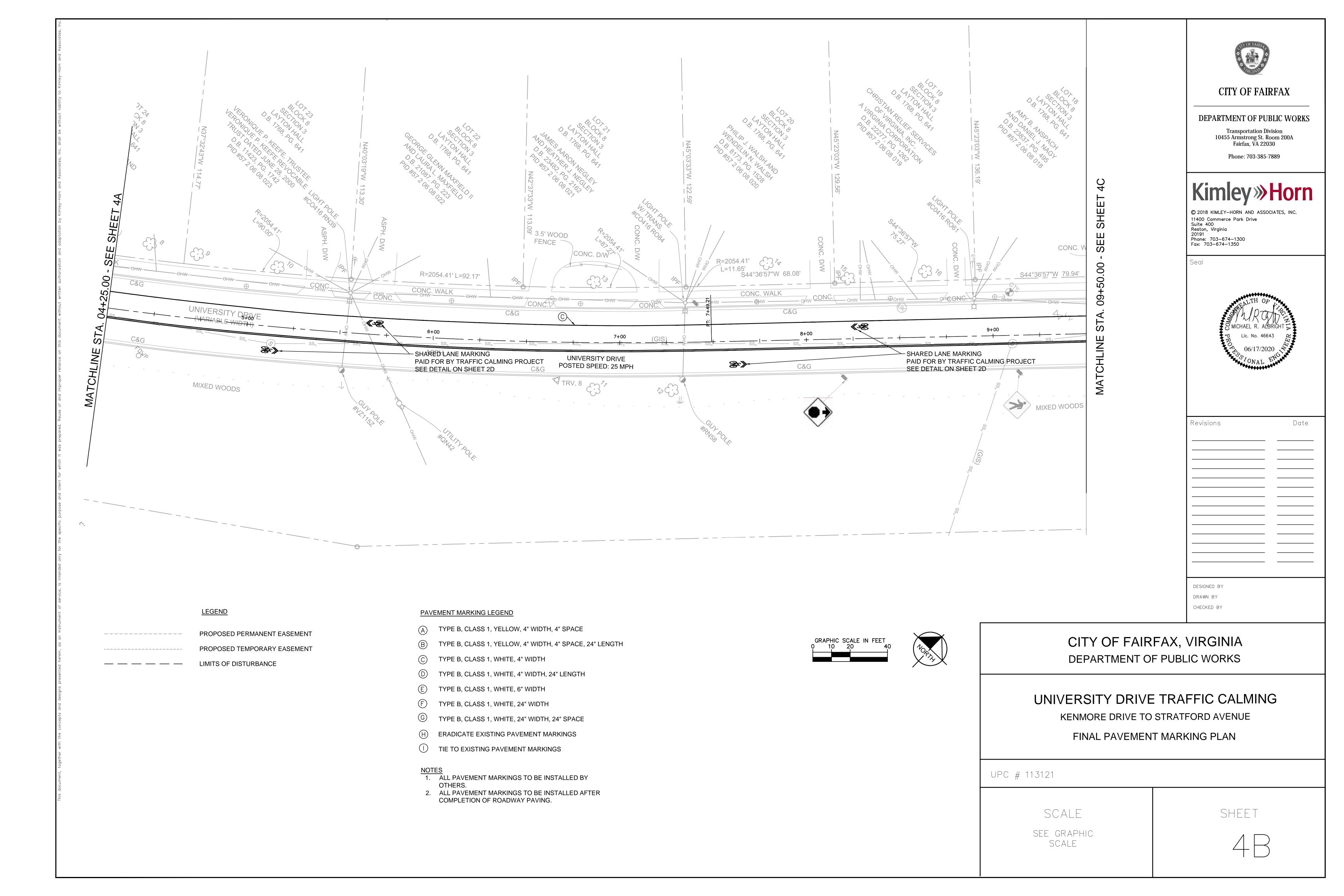


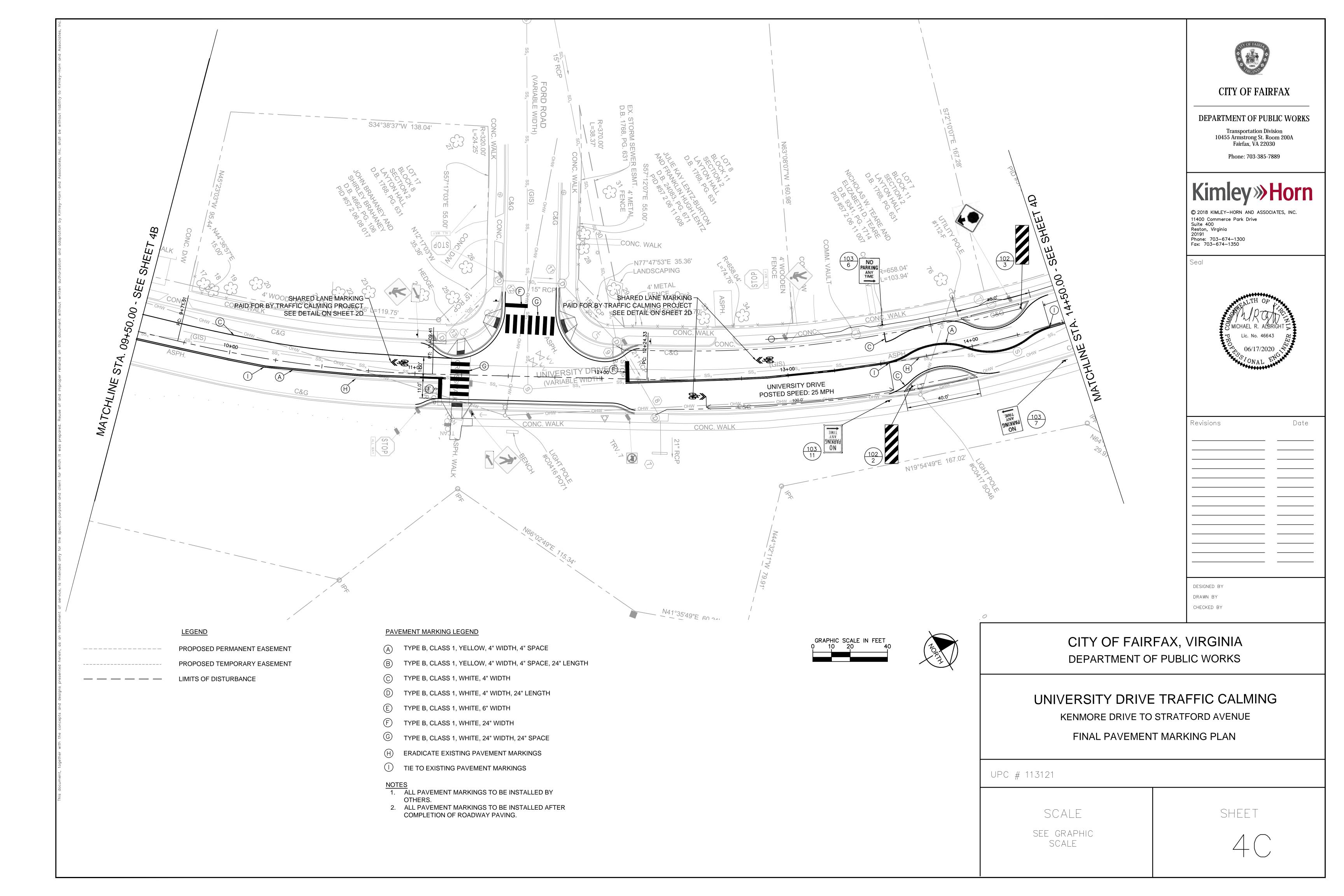


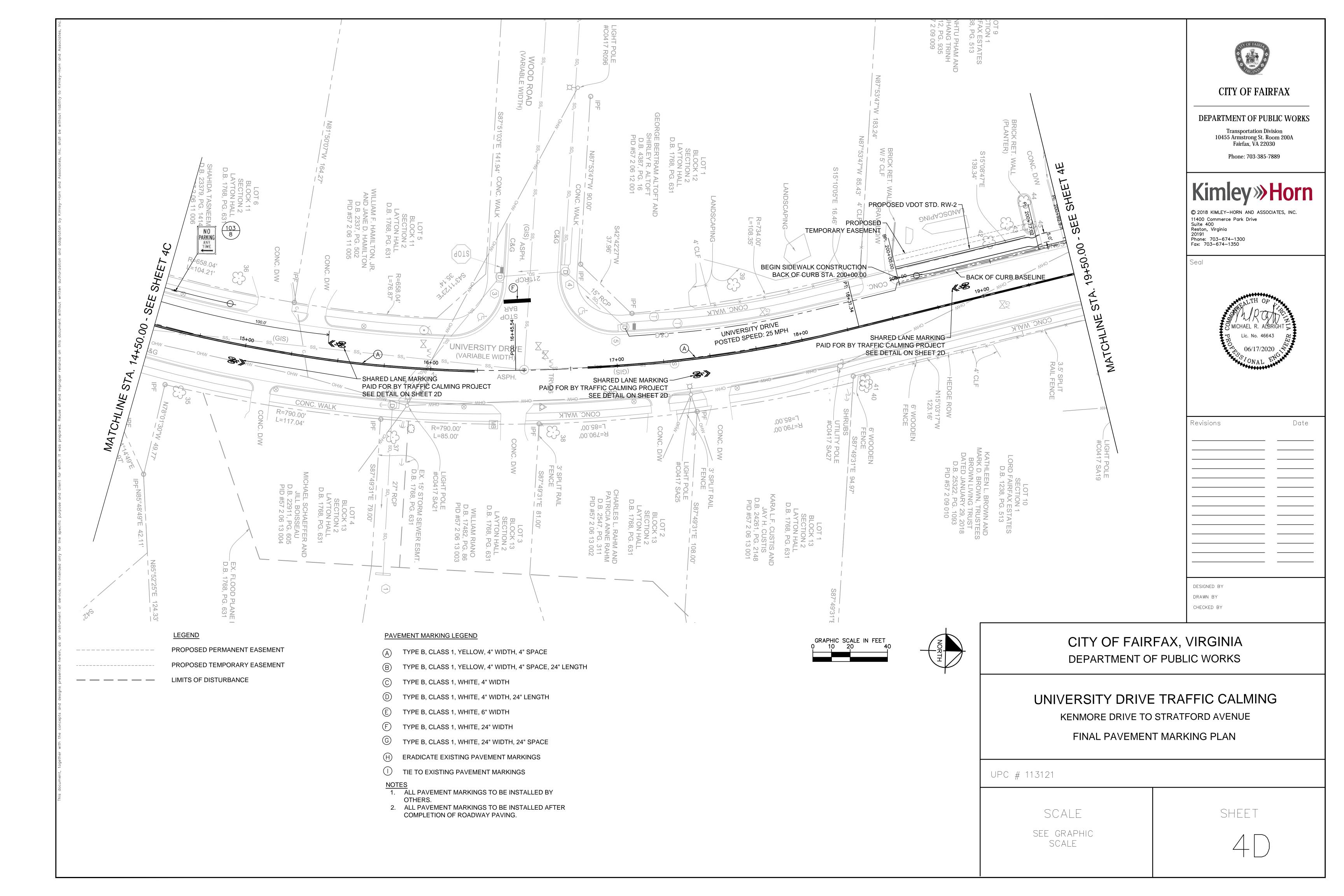


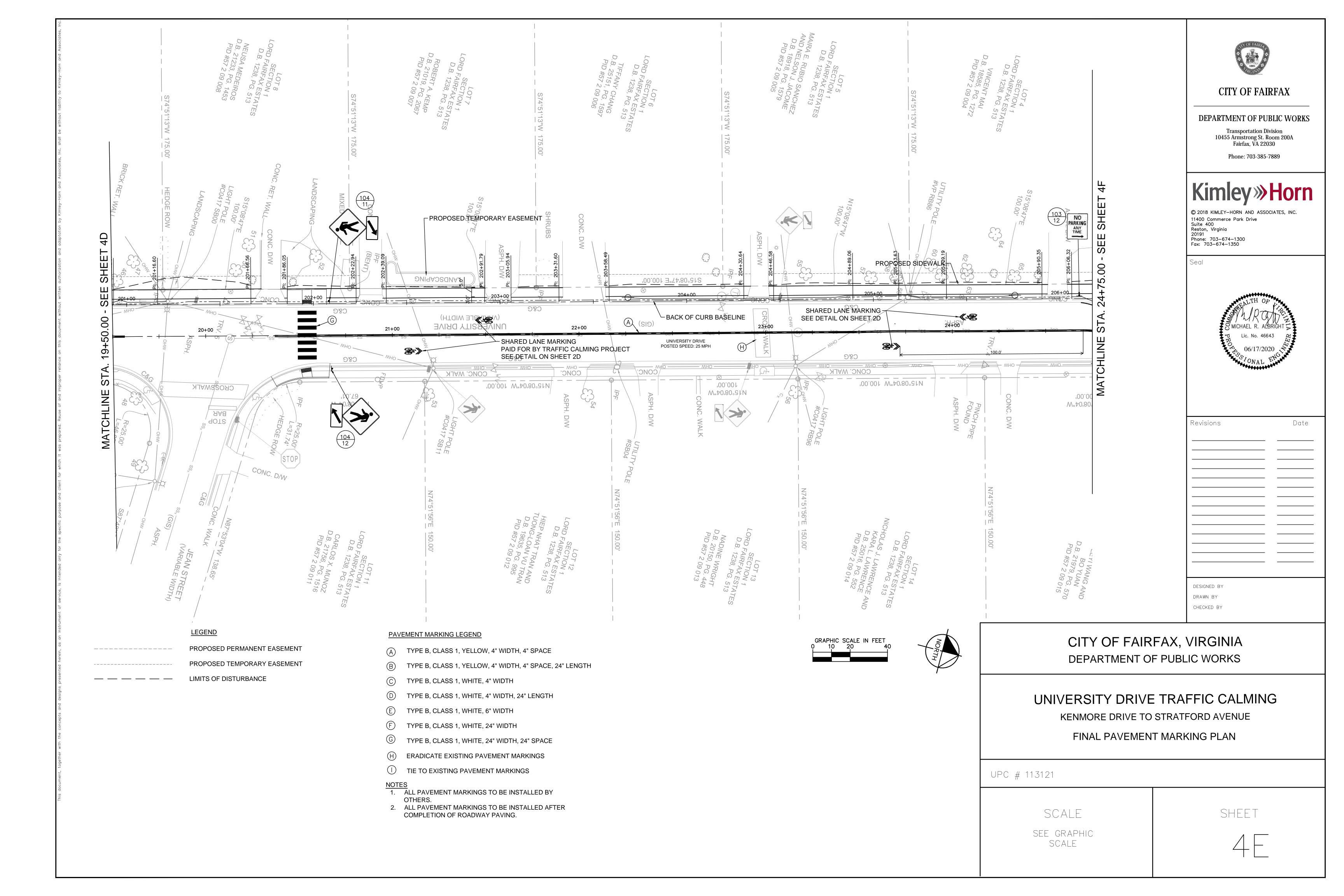


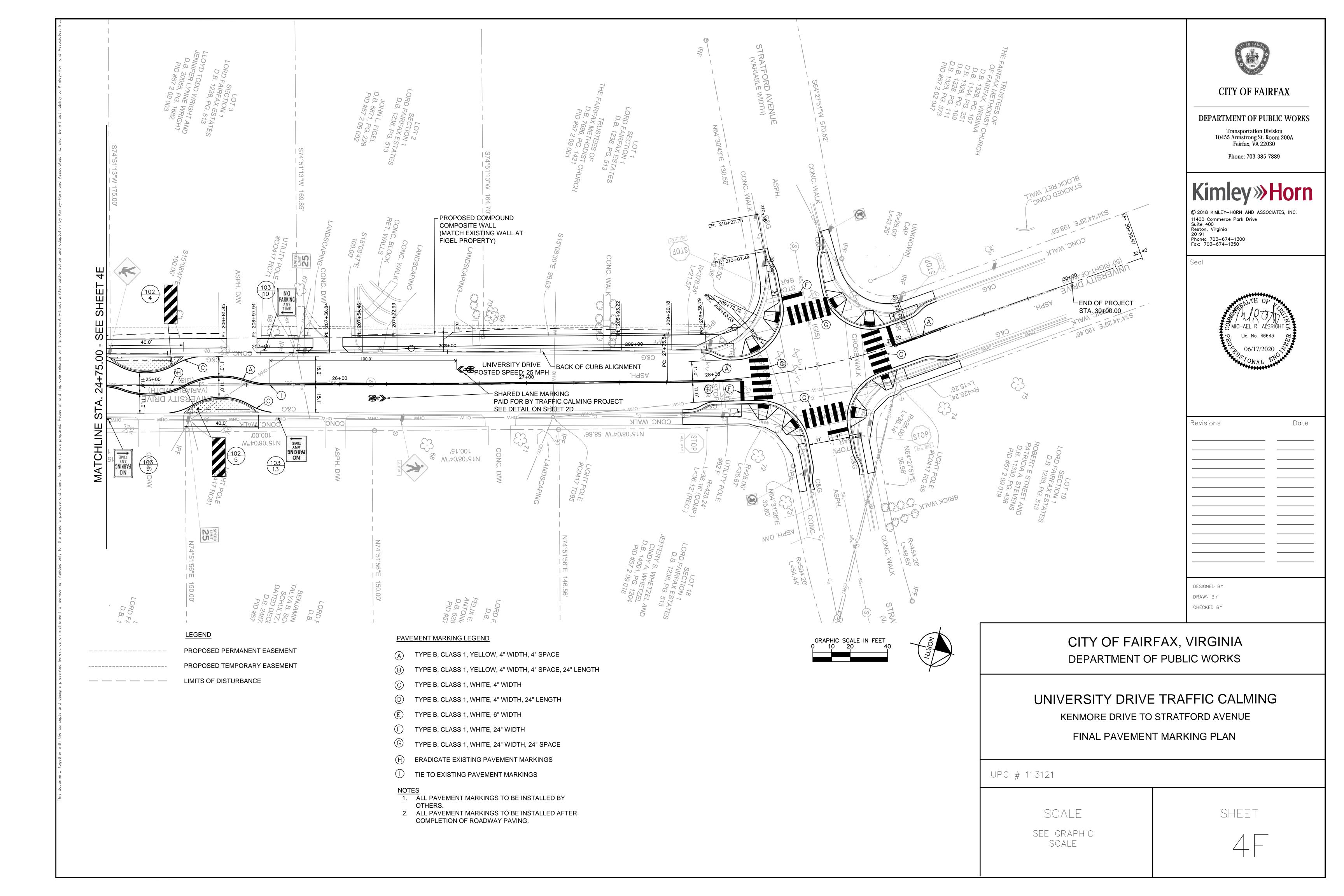


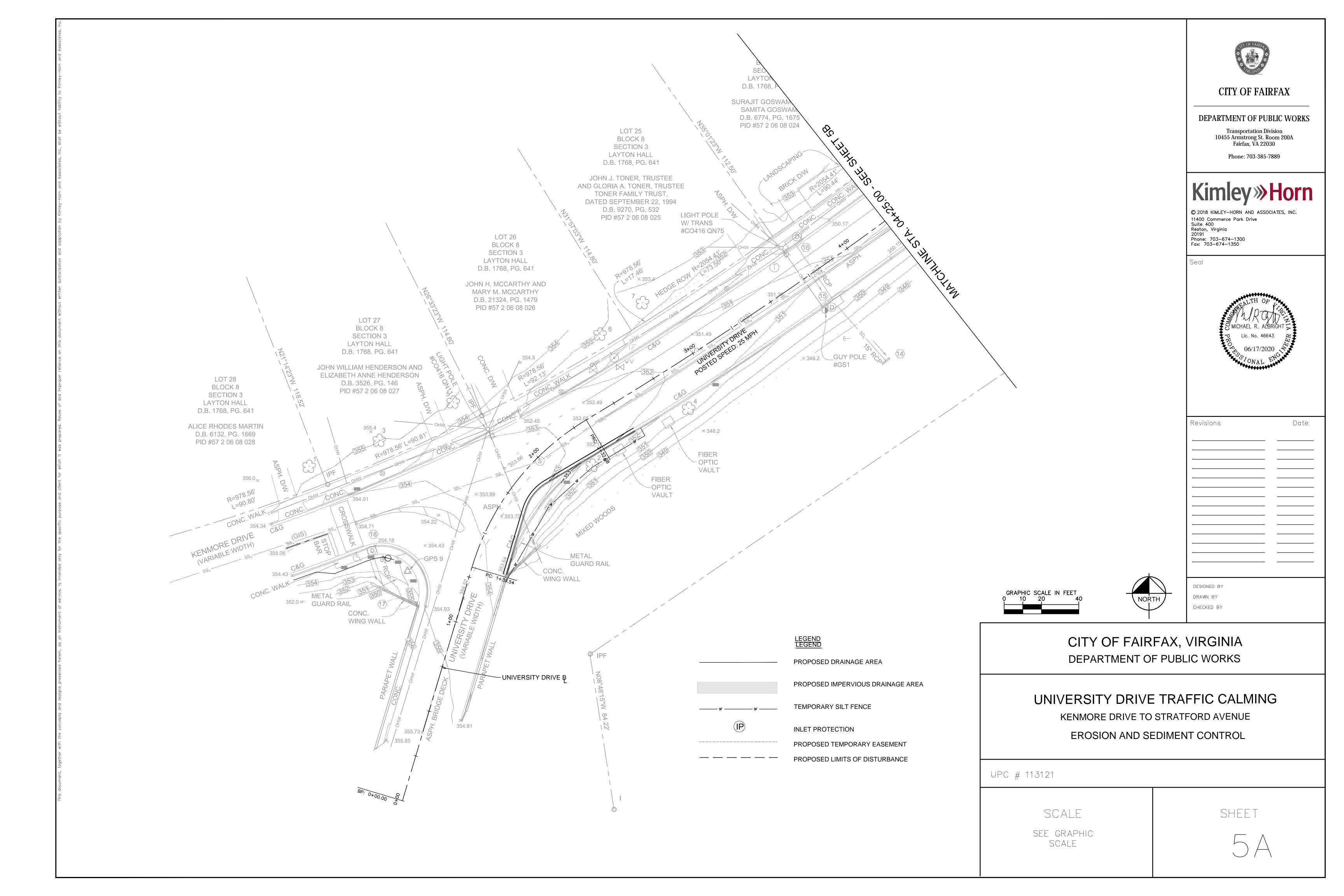


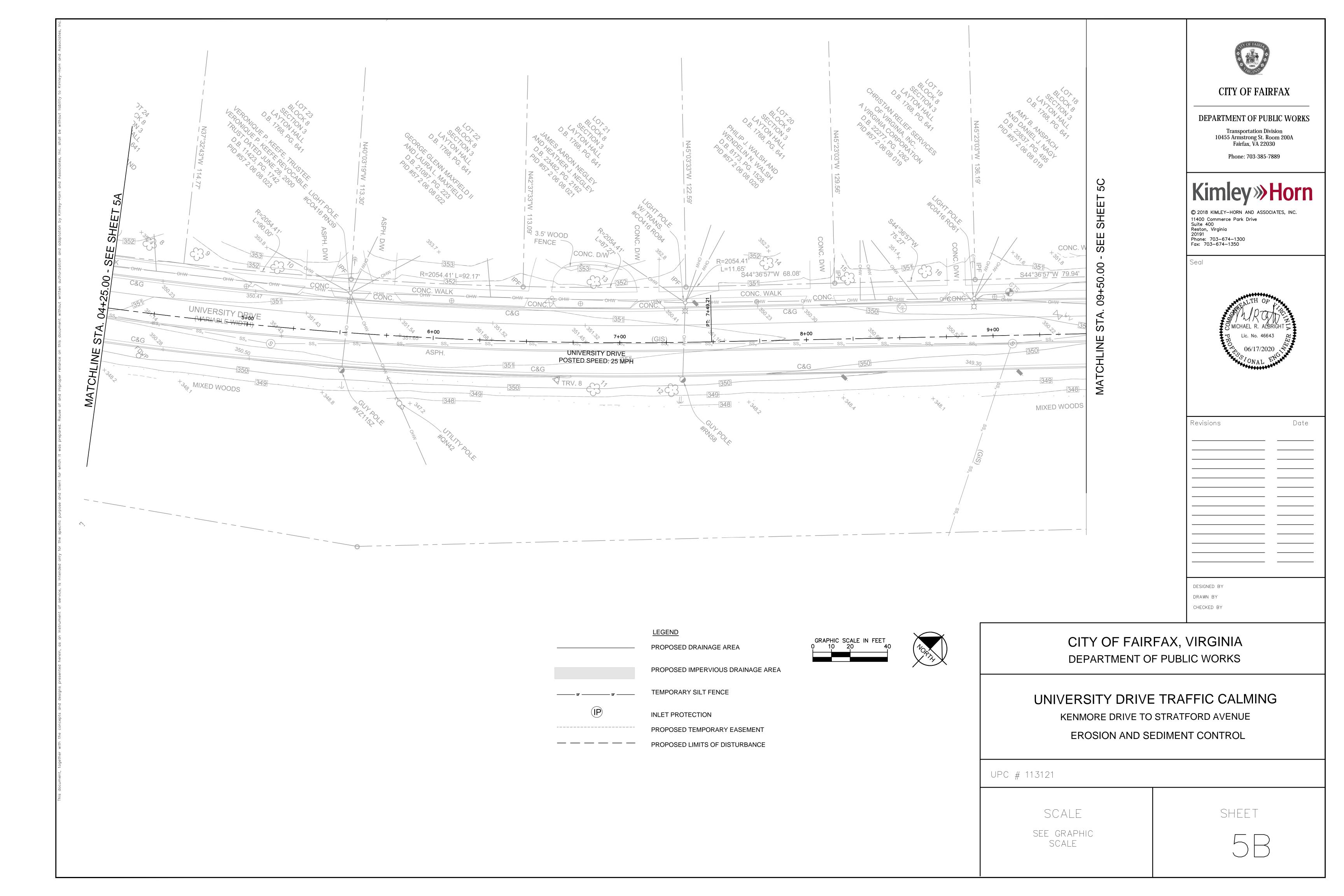


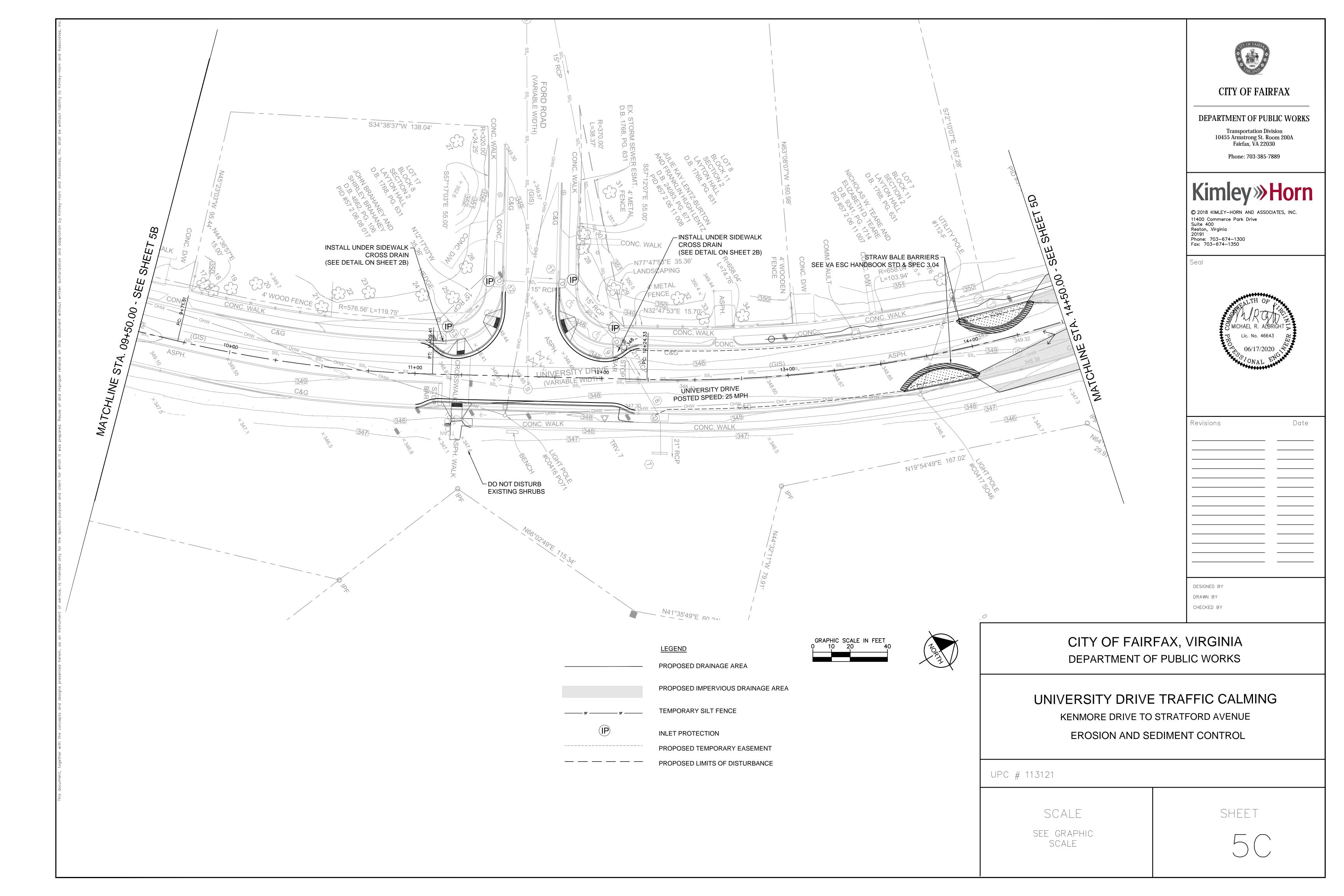


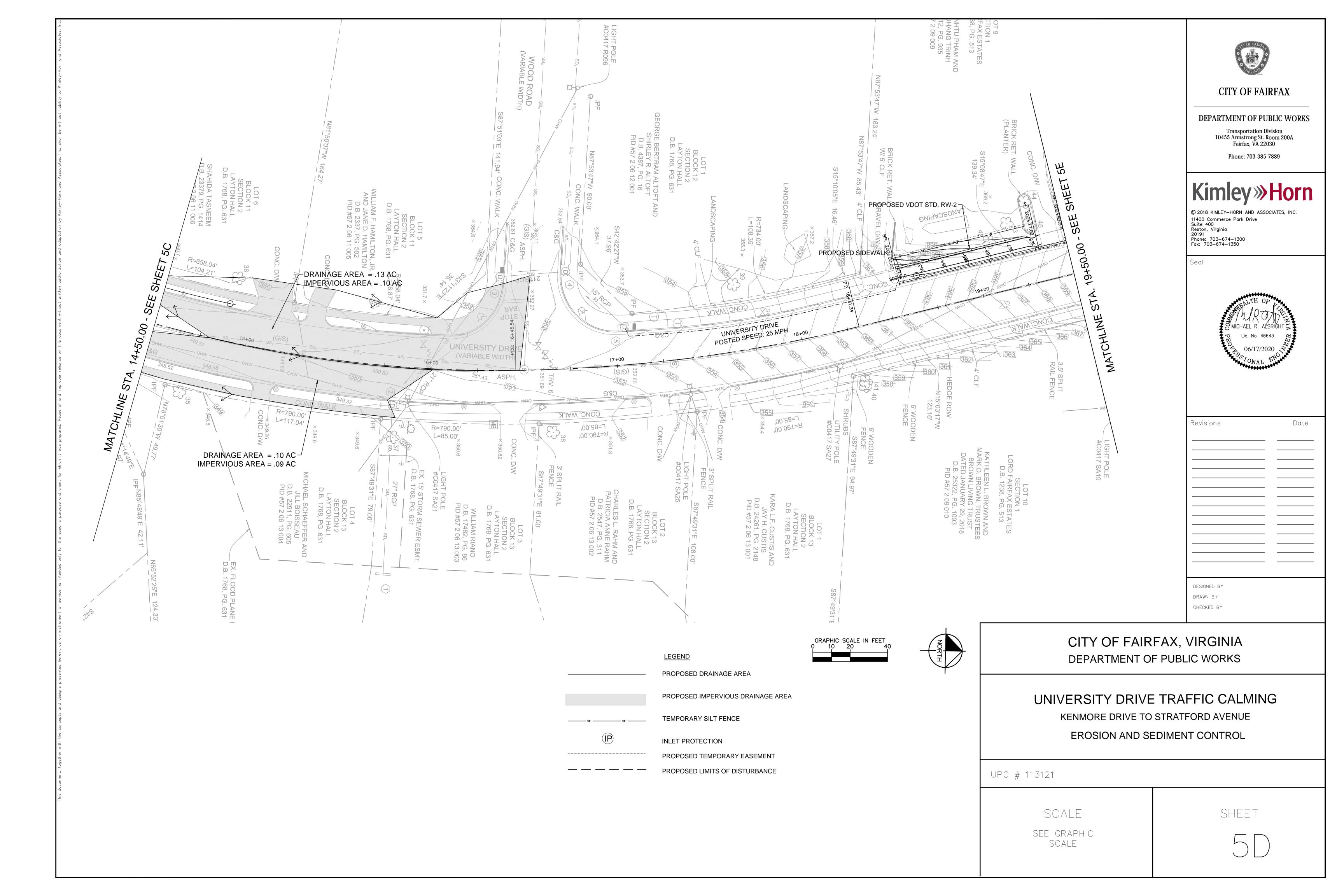


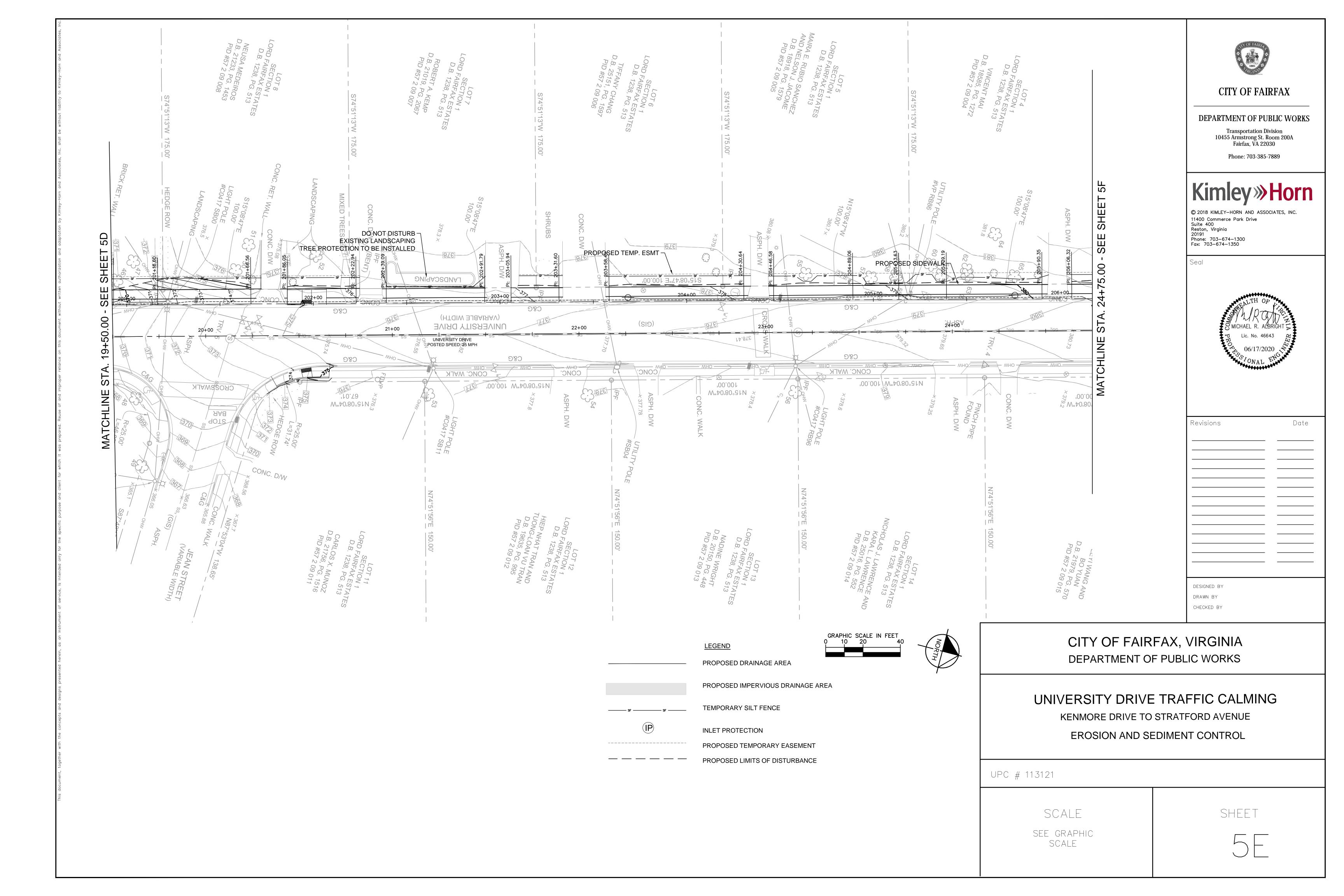


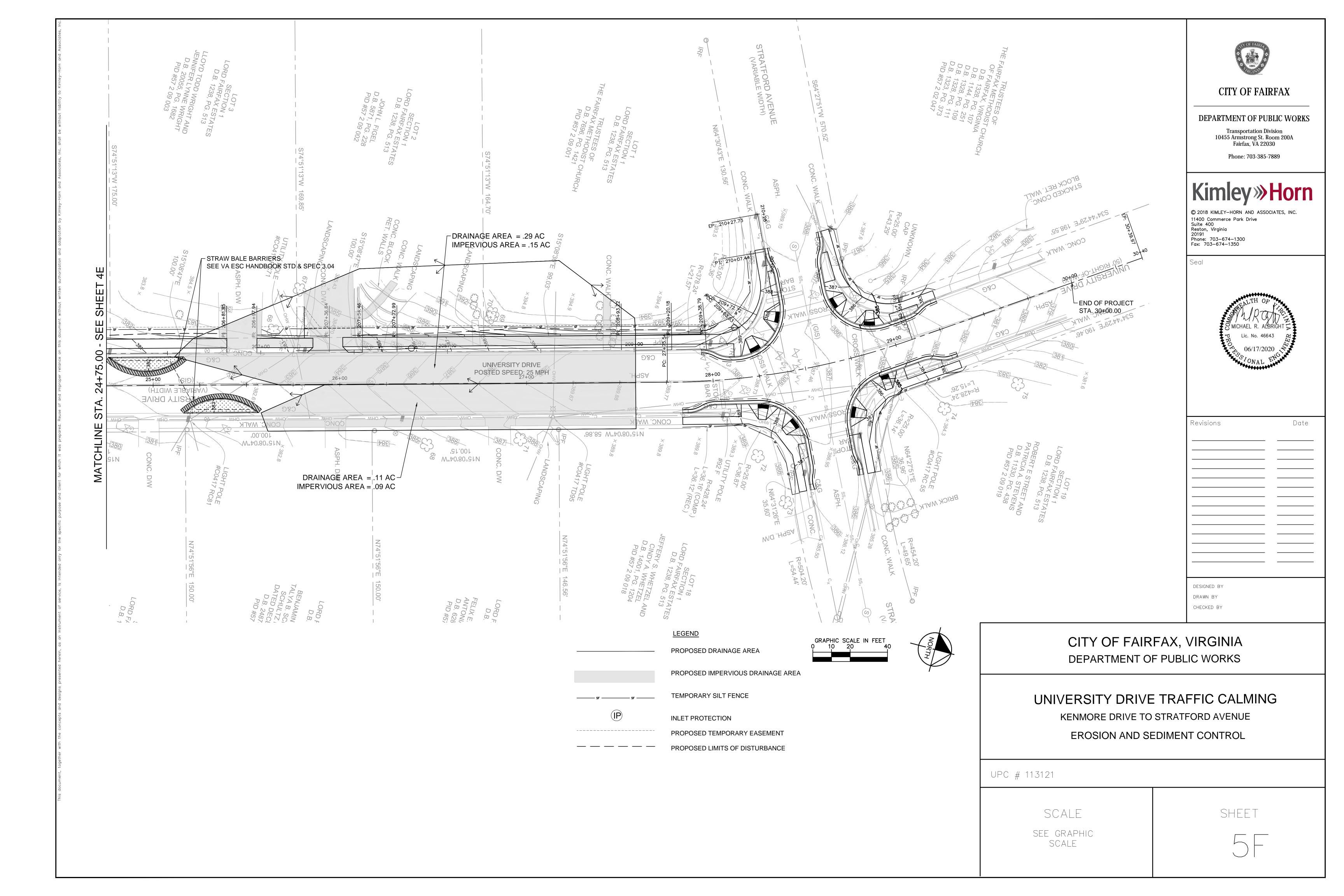






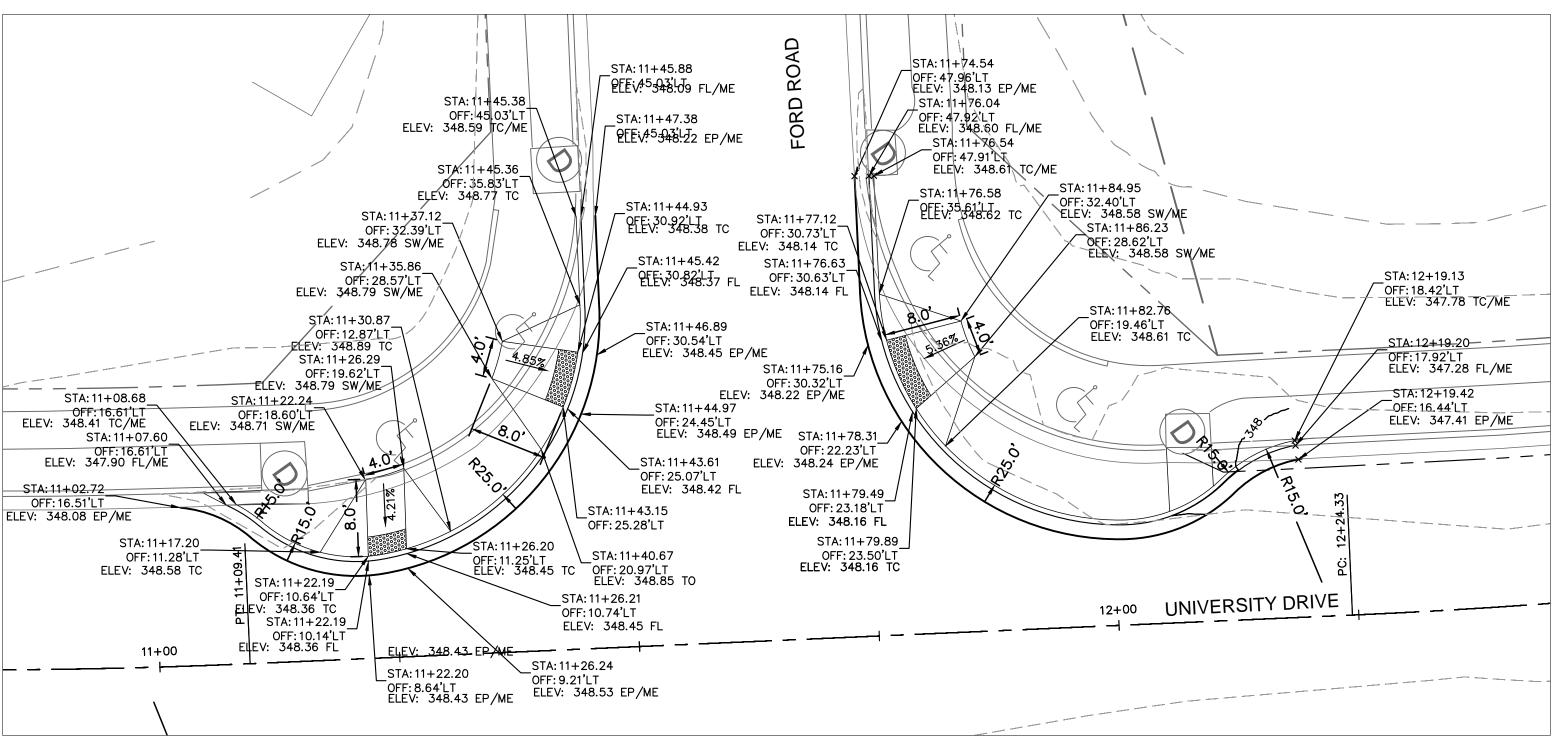


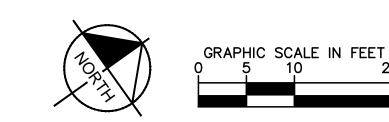


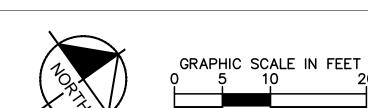


CURB REALIGNMENT - UNIVERSITY DRIVE AND KENMORE DRIVE STA: 2+51.86 OFF: 16.87'RT ELEV: 351.93 EP/ME STA: 2+51.84 OFF:18.37'RT \ELEV: 351.80 FL/ME STA: 2+51.83_ OFF: 1/8.87'RT STA:1+82.82_ OFF:11.36'RT ELEV: 353.21 FL STA:1+82.82_ OFF:9.86'RT ELEV: 353.33 EP/ME STA: 1+32.88 off: 17.06'RT STA:1+32.92 OFF:18.56'RT ELEV: 353.56 FL/ME

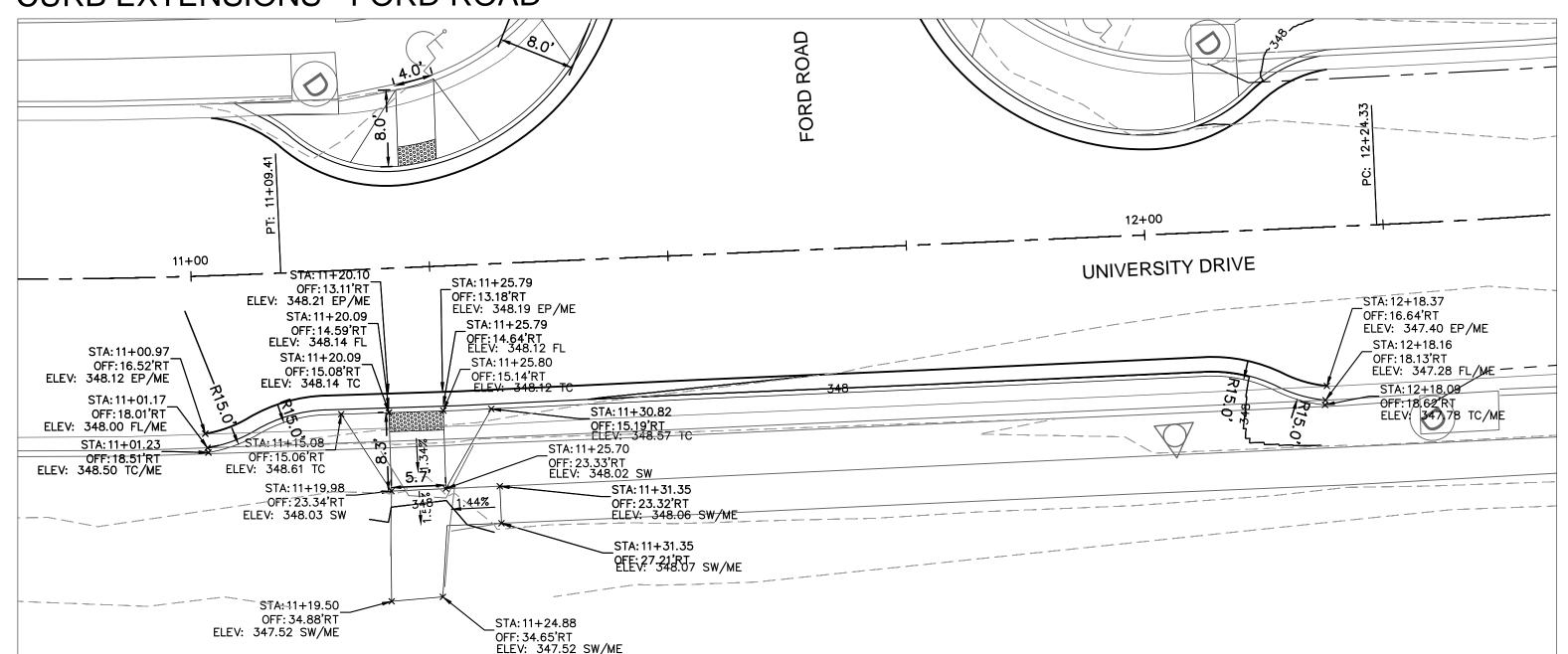
CURB EXTENSIONS - FORD ROAD







CURB EXTENSIONS - FORD ROAD



<u>LEGEND</u>

SW - SIDEWALK

TC - TOP OF CURB

ME - MATCH EXISTING ELEVATION FL - FLOW LINE

EP - EDGE OF PAVEMENT

<u>NOTES</u>

1. GRADE AROUND PROPOSED ASPHALT AND CURB RAMPS TO ENSURE POSITIVE DRAINAGE.

2. DO NOT DISTURB EXISTING STORM DRAIN INLETS UNLESS OTHERWISE NOTED ON PLAN.

DEPARTMENT OF PUBLIC WORKS

CITY OF FAIRFAX, VIRGINIA

UNIVERSITY DRIVE TRAFFIC CALMING KENMORE DRIVE TO STRATFORD AVENUE

CURB CUT RAMP DETAILS

UPC # 113121

SCALE SEE GRAPHIC

SCALE

SHEET



CITY OF FAIRFAX

DEPARTMENT OF PUBLIC WORKS

Transportation Division 10455 Armstrong St. Room 200A

Fairfax, VA 22030

Phone: 703-385-7889

© 2018 KIMLEY-HORN AND ASSOCIATES, INC.

Date

11400 Commerce Park Drive Suite 400

Reston, Virginia 20191 Phone: 703-674-1300 Fax: 703-674-1350

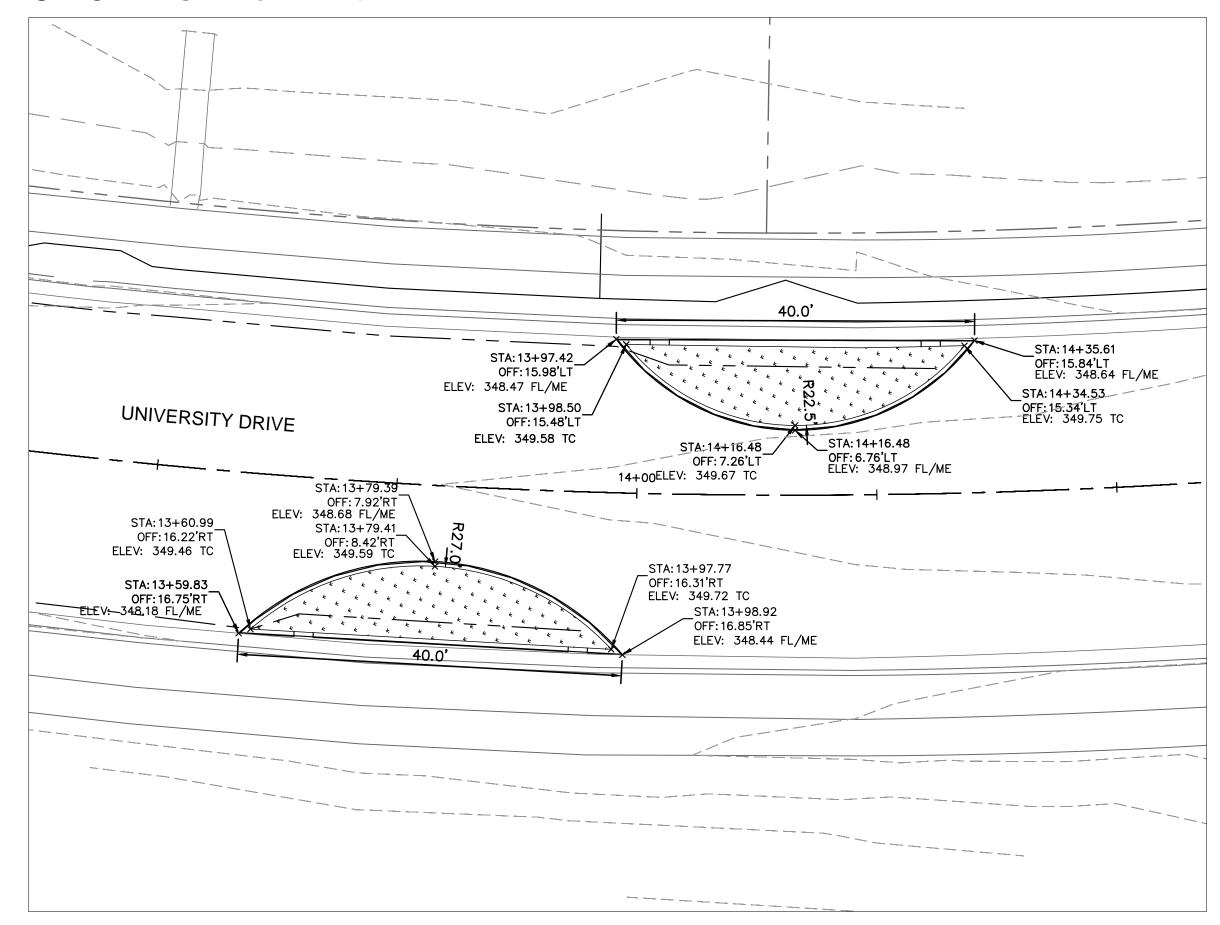
Revisions

DESIGNED BY

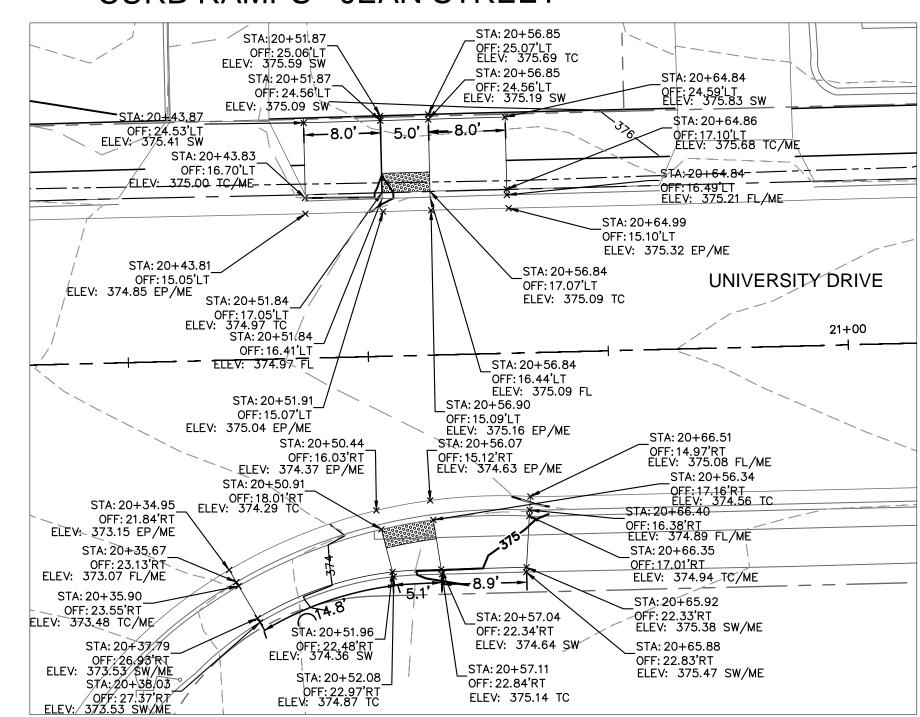
DRAWN BY

CHECKED BY

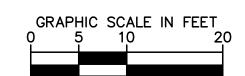
CHICANES - NORTH OF FORD ROAD



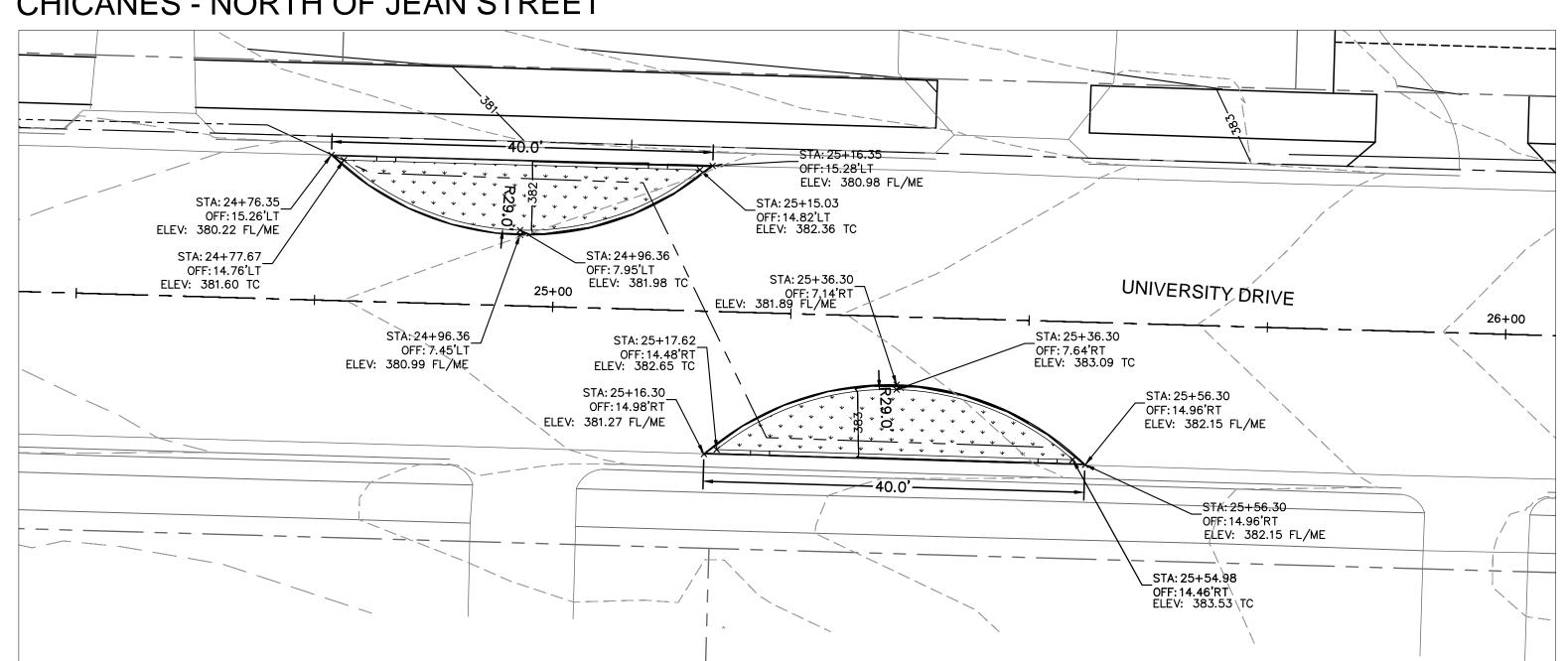
CURB RAMPS - JEAN STREET







CHICANES - NORTH OF JEAN STREET





<u>LEGEND</u>

SW - SIDEWALK

TC - TOP OF CURB

ME - MATCH EXISTING ELEVATION FL — FLOW LINE

EP - EDGE OF PAVEMENT

<u>NOTES</u>

- 1. GRADE AROUND PROPOSED ASPHALT AND CURB RAMPS TO ENSURE POSITIVE DRAINAGE.
- 2. DO NOT DISTURB EXISTING STORM DRAIN INLETS UNLESS OTHERWISE NOTED ON PLAN.



DEPARTMENT OF PUBLIC WORKS

Transportation Division 10455 Armstrong St. Room 200A Fairfax, VA 22030

Phone: 703-385-7889

© 2018 KIMLEY-HORN AND ASSOCIATES, INC. 11400 Commerce Park Drive Suite 400 Reston, Virginia 20191 Phone: 703-674-1300 Fax: 703-674-1350



Revisions		Date
	-	
	·	
	•	
	•	
	•	
	•	

DESIGNED BY DRAWN BY CHECKED BY

CITY OF FAIRFAX, VIRGINIA DEPARTMENT OF PUBLIC WORKS

UNIVERSITY DRIVE TRAFFIC CALMING

KENMORE DRIVE TO STRATFORD AVENUE CURB CUT RAMP DETAILS

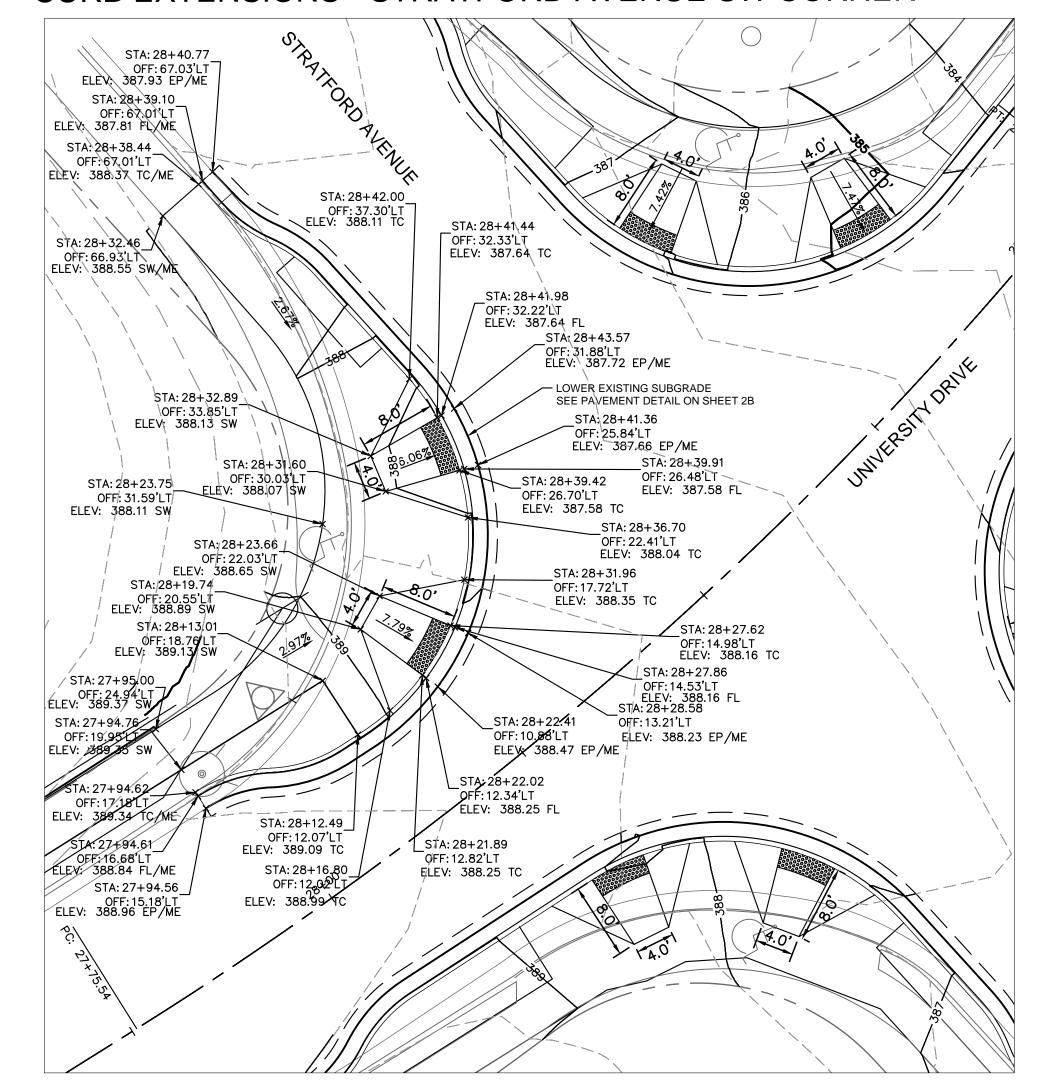
UPC # 113121

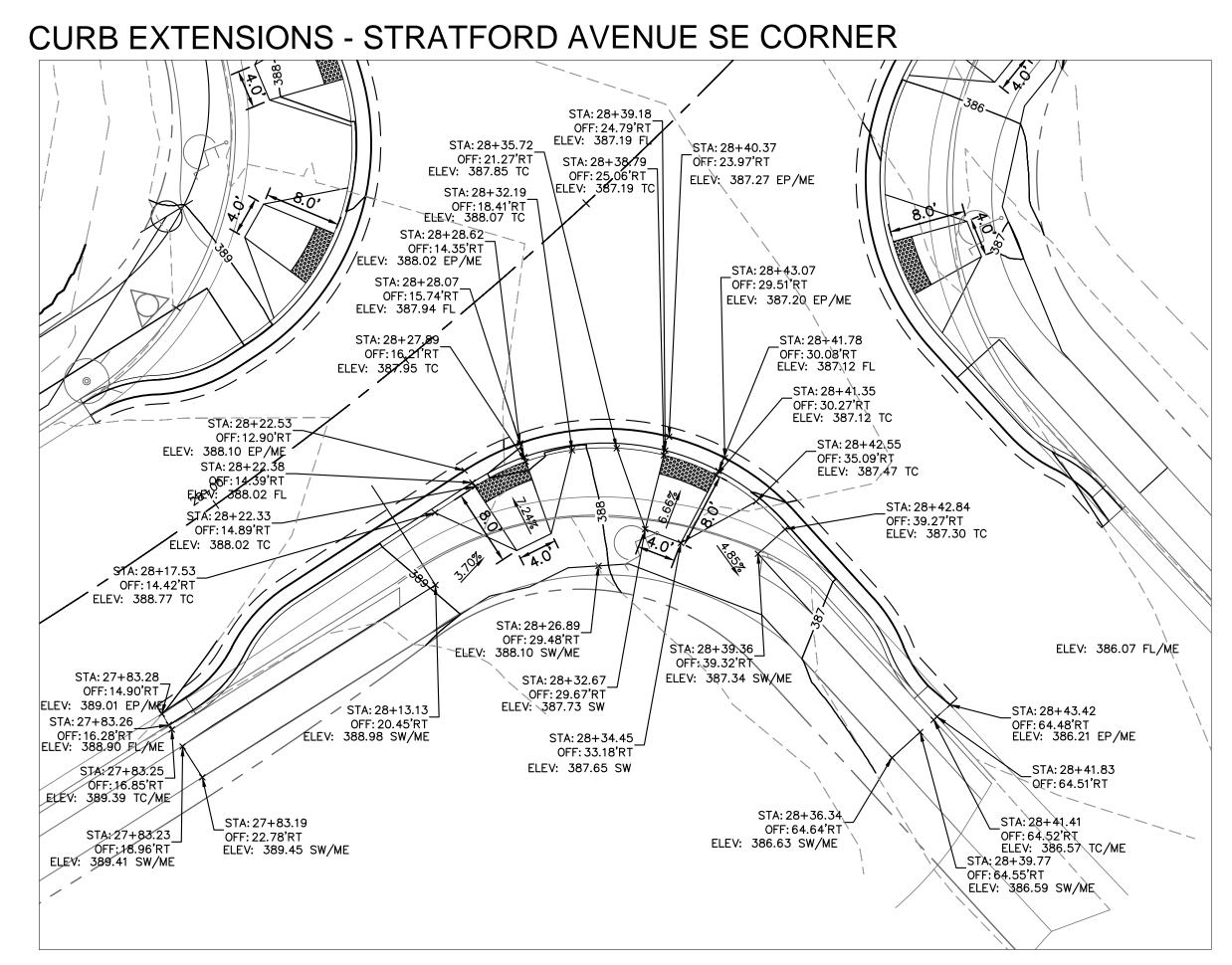
SCALE

SEE GRAPHIC SCALE

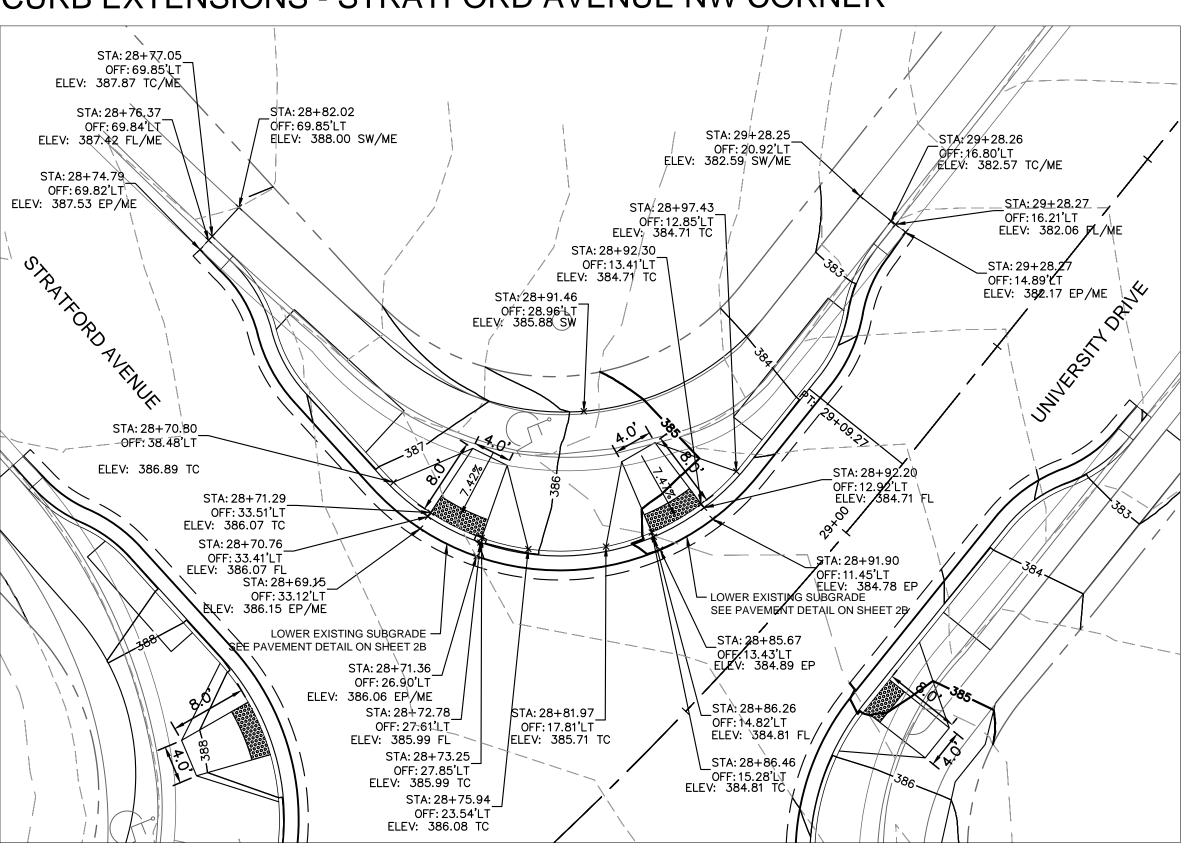


CURB EXTENSIONS - STRATFORD AVENUE SW CORNER

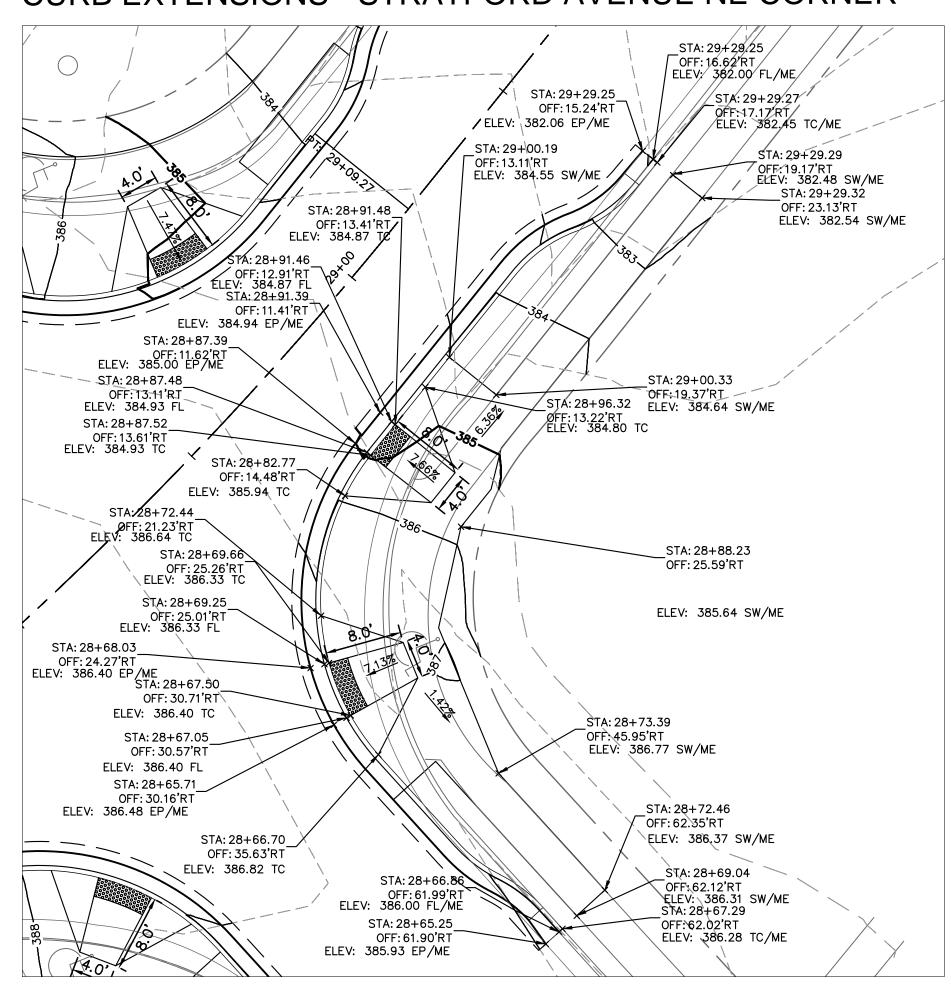




CURB EXTENSIONS - STRATFORD AVENUE NW CORNER



CURB EXTENSIONS - STRATFORD AVENUE NE CORNER



CITY OF FAIRFAX

DEPARTMENT OF PUBLIC WORKS

Transportation Division 10455 Armstrong St. Room 200A Fairfax, VA 22030

Phone: 703-385-7889

© 2018 KIMLEY-HORN AND ASSOCIATES. INC 11400 Commerce Park Drive Suite 400 Reston, Virginia Phone: 703-674-1300 Fax: 703-674-1350

Revisions



Date

LEGEND

SW - SIDEWALK

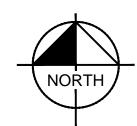
TC - TOP OF CURB ME - MATCH EXISTING ELEVATION

FL - FLOW LINE EP - EDGE OF PAVEMENT

<u>NOTES</u>

1. GRADE AROUND PROPOSED ASPHALT AND CURB

RAMPS TO ENSURE POSITIVE DRAINAGE. 2. DO NOT DISTURB EXISTING STORM DRAIN INLETS UNLESS OTHERWISE NOTED ON PLAN.



GRAPI O #	HIC SC	CALE ##	IN	FEET	#

	_	
	-	
	-	
	•	
	•	
	-	
	=	
	•	
	•	
ESIGNED BY		
RAWN BY		
HECKED BY		

CITY OF FAIRFAX, VIRGINIA DEPARTMENT OF PUBLIC WORKS

UNIVERSITY DRIVE TRAFFIC CALMING

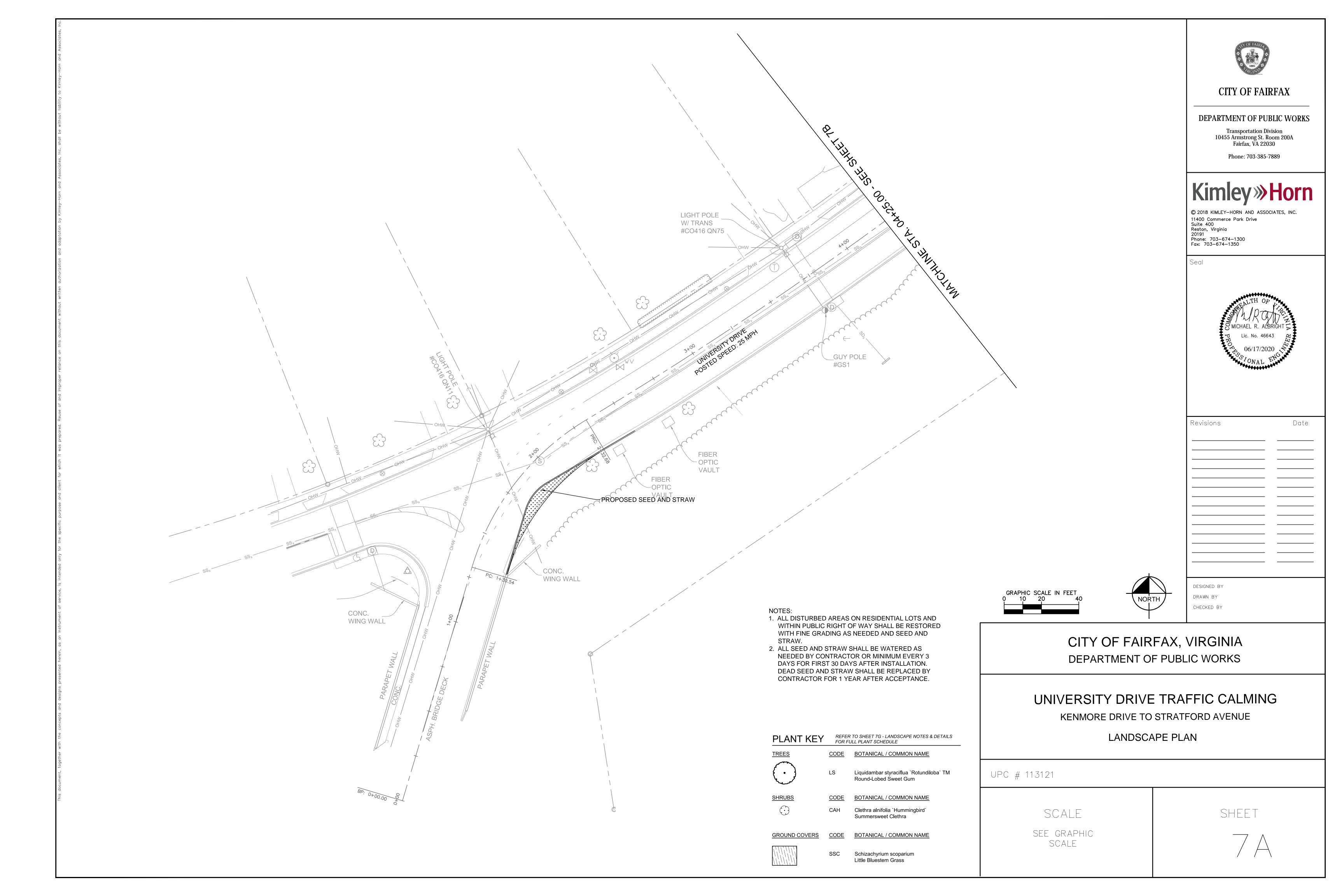
KENMORE DRIVE TO STRATFORD AVENUE CURB CUT RAMP DETAILS

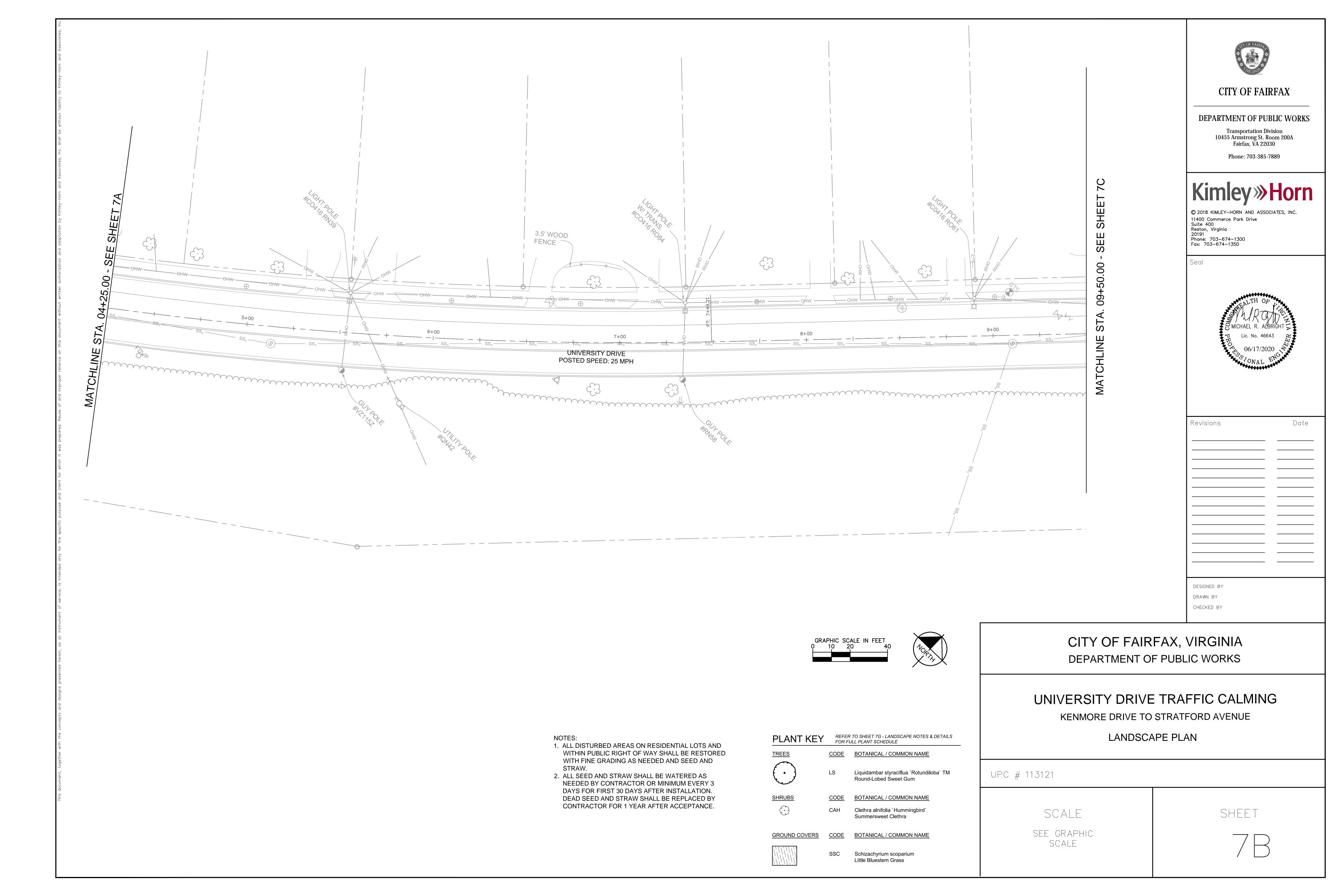
UPC # 113121

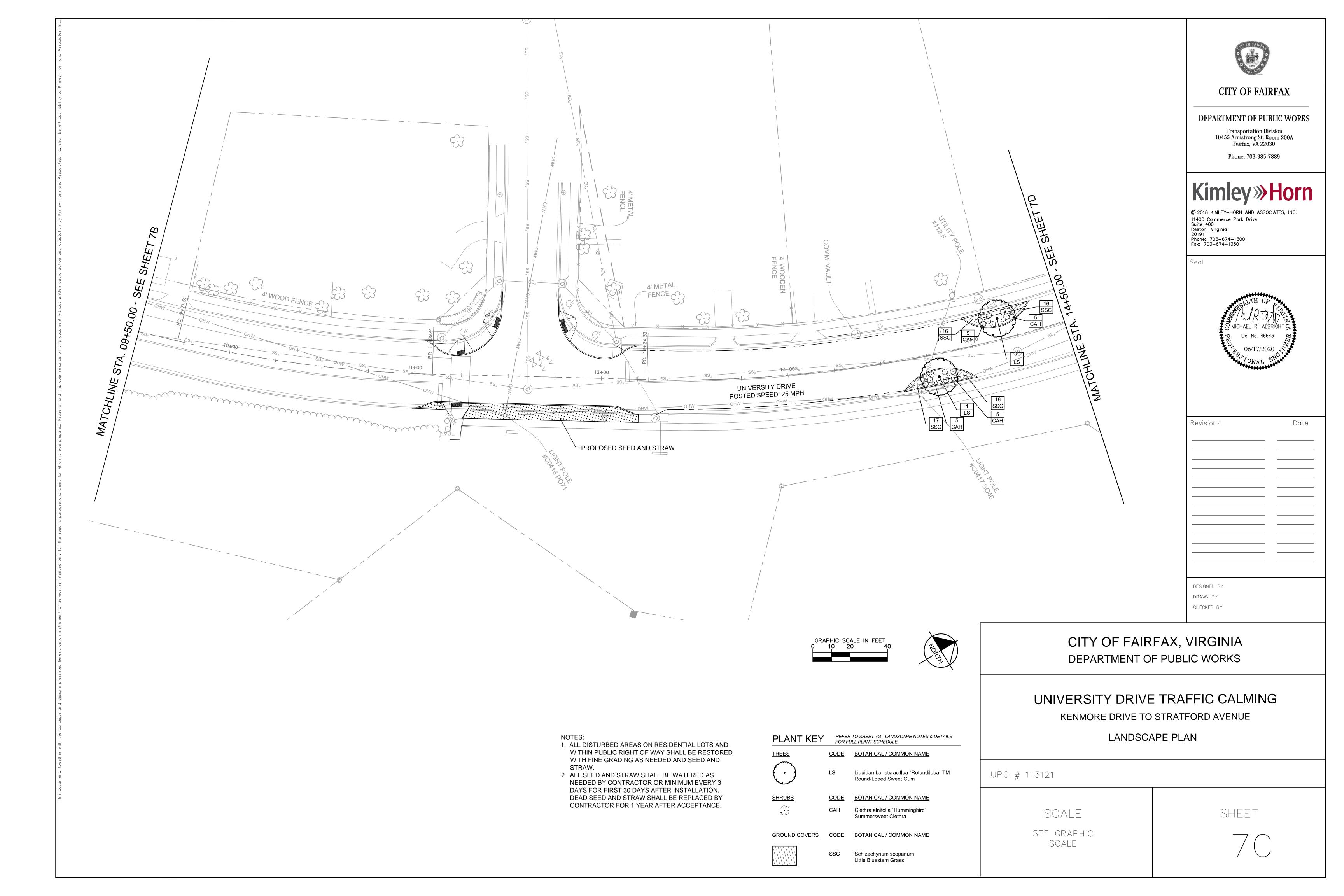
SCALE SEE GRAPHIC

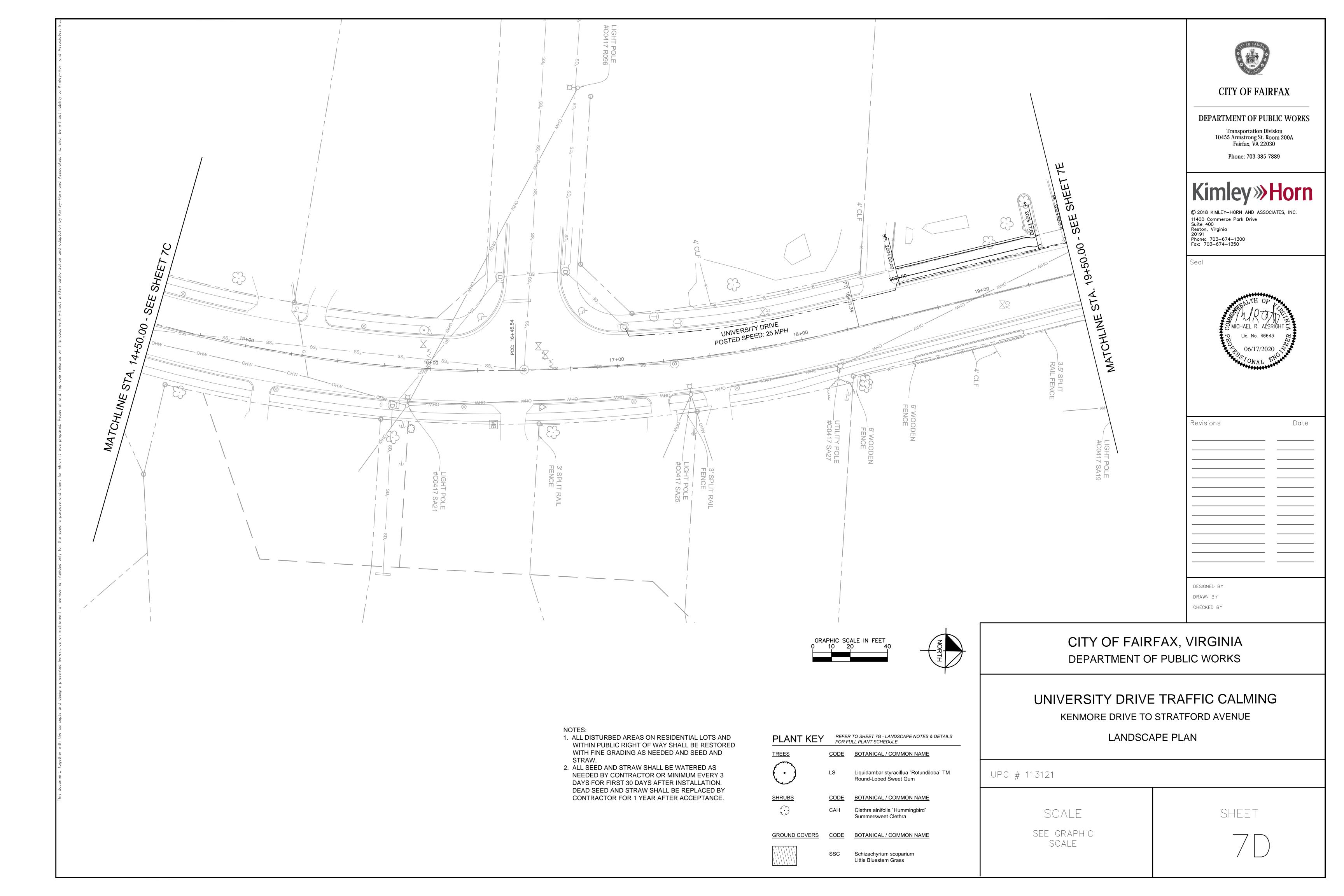
SCALE

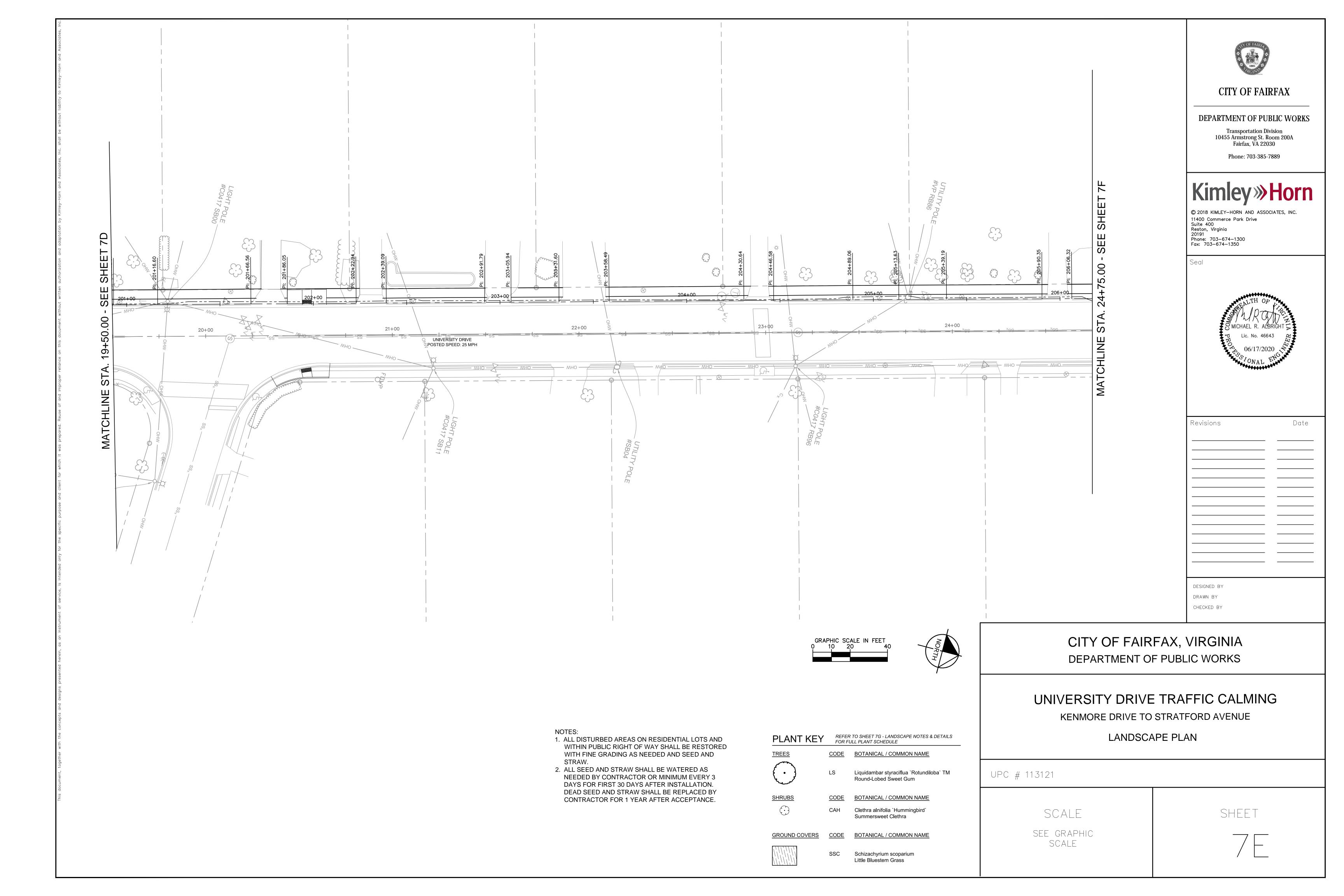


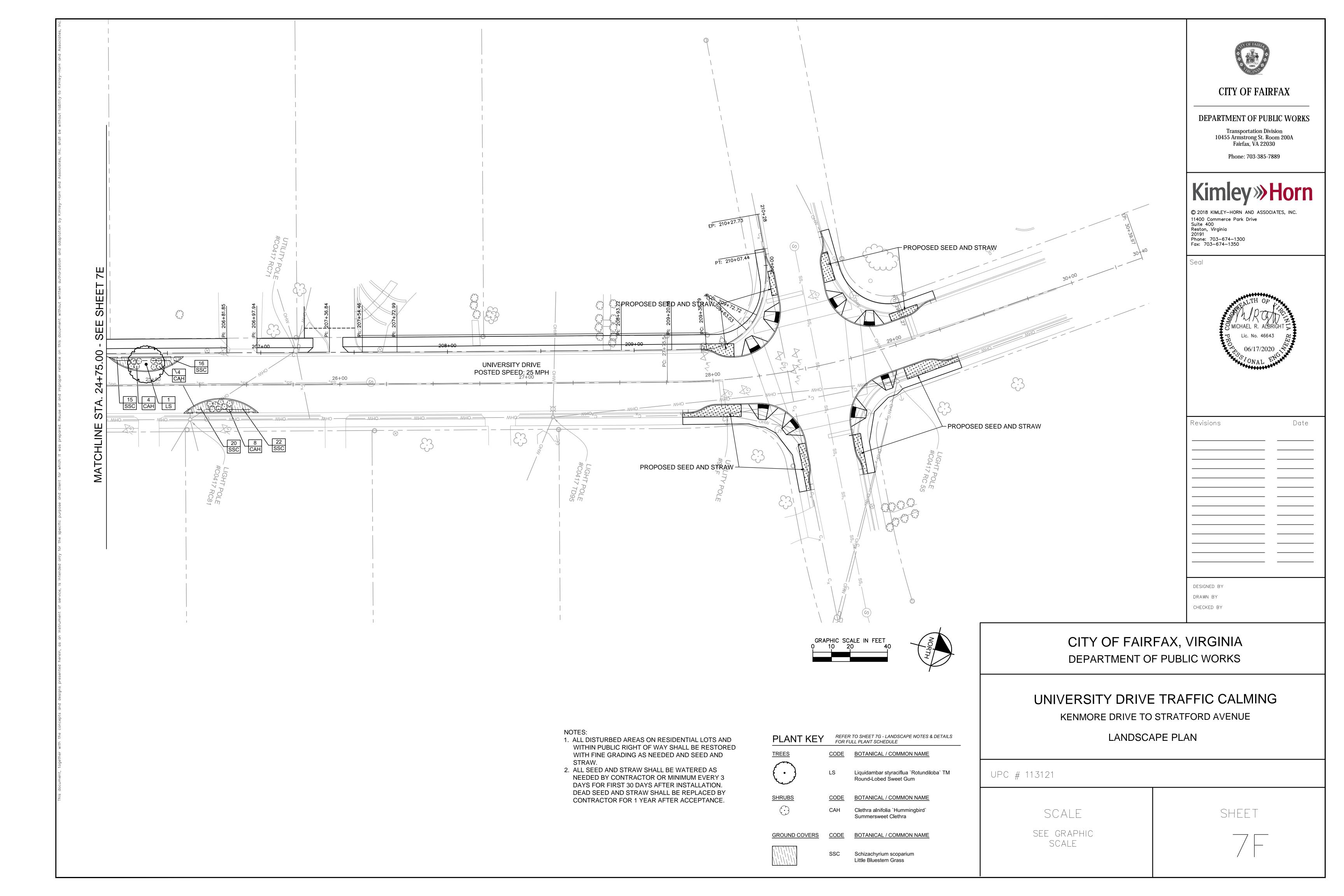












GENERAL NOTES

- 1. Plants shall be healthy, vigorous material, free of pests and diseases and are subject to approval/rejection of the Landscape Architect prior to, during and after installation.
- 2. Contractor shall identify all materials at growing location prior to purchase and submit digital photographs, and source list to the Landscape Architect for approval at a minimum of six (6) calendar weeks prior to installation. Plants not approved shall be resourced and resubmitted.
- 3. Planting beds and individual tree plantings shall be mulched continuously as specified.
- 4. Prior to construction the contractor shall be responsible for locating underground utilities and execute work in a manner that avoids damage to utilities during the course of work. Contractor shall be responsible or remedy of any damage to utilities, structures, site appurtenances that occur as a result of landscape related work.
- 5. Contractor is responsible for verifying quantities shown on documents. Field adjustments shall be approved by Landscape Architect prior to installation. Quantities indicated on drawings are for reference-it is the Contractor's responsibility to ensure full coverage of plants at the indicated spacing.
- 6. Contractor is responsible for maintenance of all plantings including, but not limited to watering, mowing, edging, spraying, mulching, fertilizing, of plantings and turf areas for one (1) calendar year from date of certificate of occupancy. Contractor is responsible for warranty of all plant material for a period of one (1) calendar year from date of certificate of occupancy. Warranty replacement planting shall meet or exceed the original specification identified on drawings. Replacement planting shall extend the same warranty as originally installed materials. Plantings and grass areas shall be flourishing and fully thriving at end of warranty period.
- 7. Plants identified for replacement by Owner, Landscape Architect shall be replaced immediately by the Contractor unless otherwise agreed upon. Plantings (trees, shrubs, groundcover) subject to replacement by warranty shall exhibit characteristics of 30% dead-per individual plant, non-contributing or disease
- compromised. Grass areas suitable for acceptance shall demonstrate 85% sustained/consistent and continuous, densely established coverage. Contractor shall perform a site review at end of warranty period and provide the Owner with written
- influencing plant health. Contractor shall remove from plants and site, all staking and guying material at end of warranty period.

documentation of the site, including plant health, warranty replacement items, and conditions that may be

- 8. Contractor shall comply with all local, state and federal requirements, codes and regulations related to the work undertaken. 9. All material including planting operation appurtenances shall be of domestic origin manufacture and
- sourced within 100 miles of the project site. 10. Contractor is responsible for coordination among trades operating on site. Coordination and if necessary resulting modifications to schedules are responsibility of the Contractor.

PERFORMANCE SPECIFICATION

I. PLANTS

- A.General
- 1. Live healthy plants free of dead branches and parts 2. Free of disease, insect, injury and damage
- 3. Unbroken, intact, dense and solid rootballs and containers, without cracks, flat sides or previously repaired
- 4. Free of girdling roots or rootbound/circling container conditions
- 5. Plants of consistent in growth habit and healthy character
- 6. Free of compromising growth conditions such as weak crotch connections, crossed branches, snags and
- 7. Point of origin growing location within 100 miles of project site
- 8. Graded, standards, caliper, sizes and stock consistent with ANSI Z60.1, American Standard for Nursery
- Stock most current edition
- 9. Species identified consistent with <u>Hortus Third: Concise Dictionary of Plants Cultivated in the United</u>
- States and Canada, most current edition and Manual of Woody Plants: Their Identification, Ornamental Characteristics, Culture, Propagation and Uses, most current edition
- 10. All disturbed areas shall be grass seed unless otherwise identified on landscape plans

B. Trees:

1. Deciduous Single Trunk

- a. Full, straight and upright with consistent symmetrical natural branching pattern throughout
- b. Branching Height-seven (7) feet to lowest branch in two years unless otherwise required by local jurisdiction

2. Deciduous Multi-Trunk

- a. Full and upright with straight consistent symmetrical natural branching pattern throughout
- b. Canes evenly spaced and of similar growth habit c. Free of suckers and extraneous branching

3. Evergreen Single-Trunk

- a. Full and upright with continuous symmetrical dense natural habit
- b. Clear branching height twelve (12) inches above top of rootball c. Free of suckers and extraneous branching
- d. Do not shear or otherwise prune to shape plantings

C.Evergreen and Deciduous Shrubs 1. Full, dense and naturally symmetrical.

- 2. Consistent with container and/or balled and burlapped size
- 3. Free of suckers and extraneous branching

4. Do not shear or otherwise prune or shape plantings

D.Evergreen and Deciduous Groundcover 1. Full and dense in pots or flats

E. Perennials and Seasonal Color

1. Full and dense in pots or flats

F. Turf Grass

1. Subgrade a. Soil Mix-10% Compost, 90% topsoil by volume

- b. Preparation-loosen subgrade to a minimum depth of four (4) inches. Remove all non-natural materials
- including litter, stones, sticks and all items greater than ¾ inch in any dimension
- c. Preparation-spread soil mix at a depth of four (4) inches continuously to meet grade elevations shown
- on drawings. Allow for thickness of sod when applicable

2. Grass Sod

- a. Install not longer than twenty-four (24) hours from harvest
- b. Grass bed not less than two (2) inches in continuous thickness c. 100% continuous live sod coverage after first growing season and at end of warranty period.
- d. Of uniform non-varying density and continuous texture quality capable of growth and development immediately upon installation. Weed and noxious plant free
- e. Stagger installation rows and place aligned parallel to contours
- f. Fill joints solidly with planting bed preparation soil g. Provide anchor pins at twenty-four (24) inches on center for slopes greater than 4:1

3. Grass Seed

a. Mix approved by the Landscape Architect

- b. Provide first and new of year seed crops in mix free of weed seeds and deleterious matter c. Provide seed mix not greater than 15% annual or perennial rye
- d. Coverage 85% continuous coverage live stand after first growing season and at end of warranty
- e. Replacement or overseeding mixes consistent with original application/installation f. Provide erosion blankets or other slope retention methods as noted on drawings

II. Materials and Appurtenances

A.Testing

1. Materials testing information/certificates/dated labels shall be current to the project and performed/certified not greater than 120 calendar previous days from current date of submittal for review

B. Top Soil

1. Neutral Ph balance 5.5 -7.5. Friable and containing 2.0-5.0% organic matter by dry weight. Continuously free of non-soil items such as stones, debris, sticks, trash, and deleterious matter greater than 3/4 inch in any direction. Clay content shall not exceed 25%. Gravel content shall not exceed 10%. Silt shall not exceed 25%

C.Use of Existing Topsoil

1. Existing topsoil on-site may be repurposed with prior Owner approval. Contractor shall provide soil testing and additive program that demonstrates consistent performance and characteristics and composition as identified herein. Owner shall approve soil testing and soil amendment/additive methods and procedures

D. Shredded Hardwood Mulch

1. 100% organic shredded first year hardwood free of deleterious matter, rock, gravel and weed seed. Neutral Ph balance 5.5-7.5

E. Composted Pine Bark Fines

1. 100% organic ground pine bark with no particle dimension greater than 3/4-inch and no greater than 10%

wood content

F. Compost Ph

1. Balanced 5.0-8.5 mature, stable and weed free produced by natural aerobic decomposition. Free of visible contaminants and toxic substances. Not greater than 5% sand, silt, clay or rock by dry weight. Consistent with US-EPA CFR Title 40 Part 503 Standards for Class A biosolids

- G.Compost Testing 1. Prior to delivery on-site, the following items are required for approval by Owner: Feedstock percentage in final compost product; statement that the products meets federal, state and local health safety
- 2. Provide copy of lab analysis less than 120 calendar days old verifying that the product meets described physical requirements; chemical contaminants; Ph; physical contaminants; biological contaminants (including a statement that fecal coliform and salmonella testing and results comply with requirements of the US Composting Council Seal of Testing approval programs

H.Planting Mix

1. 85% topsoil and 15% Compost

I. Fertilizer

1. Granular 10% nitrogen, 6% Phosphorous, 4% Potassium granular form with 50% Nitrogen in organic form. Product and Material Safety Data as approved by Owner

J. Herbicide

1. Product and Material Safety Data as approved by Owner

1. Potable only unless otherwise approved by Owner

L. Hardwood Stakes

1. 2 x 2 x 48 inch square of sound hardwood, painted flat black on all sides

M.Tree Ties 1. Villa Non-Abrasive Rubber Tree Ties or approved equal

N. Filter Fabric

1. Mirafi 140-N or approved equal

III. Execution **A.Site Conditions**

- 1. Inspect site and notify Owner in writing of acceptance with indication that project conditions are acceptable are suitable to proceed with work. Notify Owner of any existing damage and/or other conflicting conditions. 2. Do not proceed with work until unsatisfactory conditions have been satisfactorily remedied. Notify Owner
- of acceptance prior to commencement of work. 3. Notify Owner in writing of any conditions that may preclude successful completion of work including items such as coordination with other trades, incomplete work, drainage, soil temperature and/or composition,
- access to storage/work areas, damage to conditions, etc. 4. Notify Owner in writing immediately of any items that may influence work schedule, timing of tasks,
- materials delivery and/or installation and warranty responsibilities. 5. Coordinate and cooperate with other trades working in and adjacent to work areas. Examine drawings of other trades which show development of the entire project and become familiar with the scope of required

B.Planting Seasons

Recommended seasons are a general guide based on historical climatic data and typical performance of plantings, and which vary dependent on project-specific environmental conditions. Due to construction schedules, recommended planting seasons may/may not coincide with request(s) for certificate of occupancy for projects. Coordination of planting installation and seasons shall be reviewed with Owner on an individual project basis.

Deciduous and Evergreen Trees

a. Do not install/plant the following trees between September 15 and March 15 1. Oaks (Quercus Sp., Such as Q. rubra, Q. alba, Q. phellos, Q. coccinnea)

2. Dogwood (Cornus Sp.)

3. Sweetgum (Liquidambar Sp.) 4. All Conifers and Evergreens except White Pine (Pinus strobus Sp.)

2. Deciduous and Evergreen Shrubs a. Install/plant between March 15 and June 15 and/or September 15 and November 30

3. Perennials

a. Install/plant between March 15 and June 15 and/or September 15 and November 30

a. Install/plant between September 15 and December 15

4. Spring Flowering Bulbs

Seasonal Annuals a. Install/plant in season per approved schedule

6. Turf Grass a. Install/plant between March 15 and May 15 and/or September 15 and November 30

degrees Fahrenheit, or forecast for a twelve (12) hour period after completion of work

b. Do not install/plant seed or sod turf grass areas when ambient air temperature is below forty (40)

No Plant Installation

a. Do not install plantings or turf grass between June 15 and September 15, without approval by Owner

C.Positioning & Location of Plantings

1. Position plants to show the most-prominent and well-formed face to most-public view

2. Field locate plants and location/spacing/dimension of planting beds on project site prior to beginning

3. Verify location of individual plants and plant beds prior to beginning installation. Do not proceed without Owner approval

1. Pursue work continuously without delay or interruption until completion unless notified otherwise by Owner 2. Provide project submittals ahead of commencement of work. Landscape Architect requires a minimum of ten (10) working days from date of receipt for review of submittals and response to Owner and Contractor. Plan accordingly for procurement of materials

- 3. Continuously update implementation schedule and notify Owner of progress. Delays related to material availability are not cause for non-completion of scheduled delivery of work
- 4. Report delays due to weather or site conditions immediately upon finding. Provide recommendation for remedy of schedule delays. Do not work, place or modify frozen soil

E. Clean Up

1. Remove trash, debris and work materials from site prior to request for substantial completion. Thoroughly clean surfaces impacted by work including building, parking areas, roadways, sidewalks, signs, lights, site 2. Repair any damage to existing conditions that occurred during execution of work.

3. All clean-up and demobilization procedures shall be performed to satisfaction of the Owner and Landscape

5. Report delays due to extraordinary natural or other conditions beyond control of Contractor

PLANT SCHEDULE

SET SHRUB AT ORIGINAL GRADE OR UP

SHEET 2I. ~MULCH ON TOP OF ROOT BALL SHALL

BOTTOM OF ROOT BALL RESTS ON

RECOMPACTED SOIL.

SHRUB PLANTING

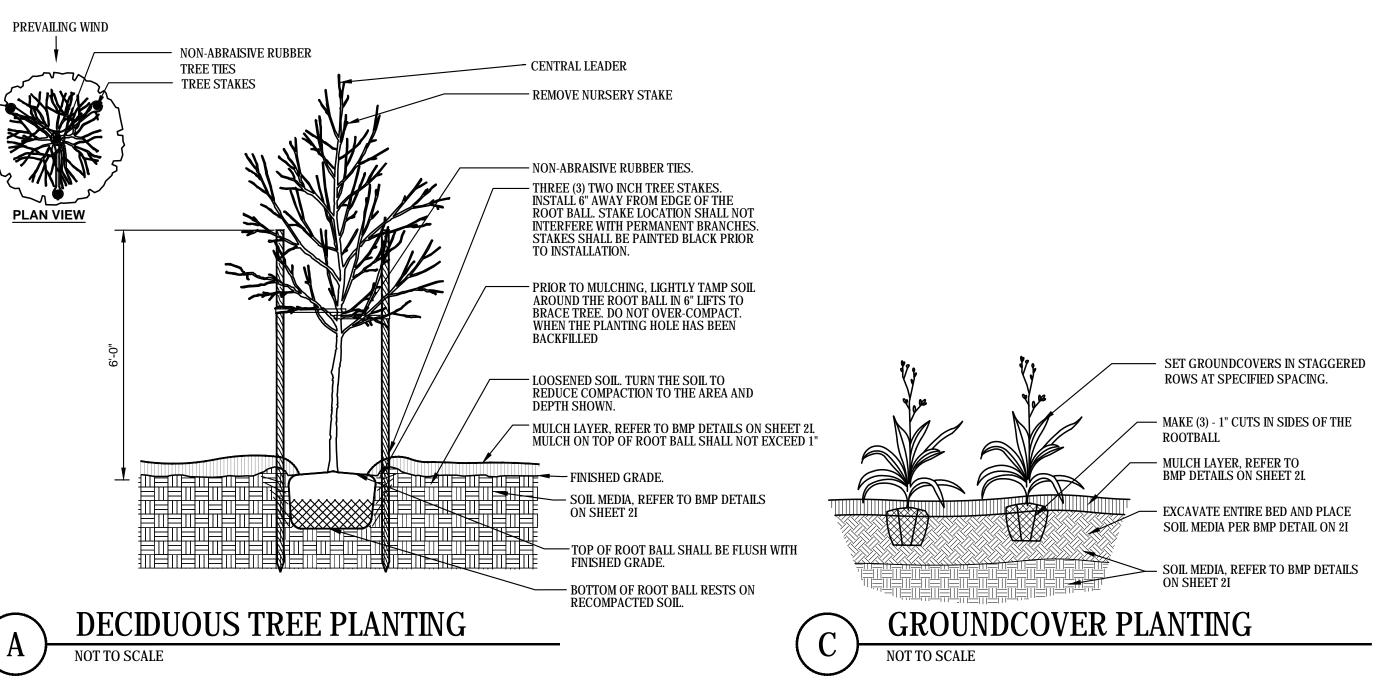
MULCH LAYER, REFER TO BMP DETAILS ON

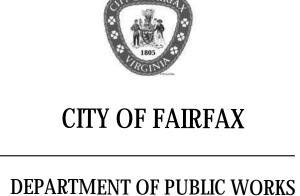
· MAKE (3) - 1" CUTS IN SIDES OF THE ROOTBALL

- SOIL MEDIA, REFER TO BMP DETAILS ON SHEET 2I

TO 1/8 DEPTH OF ROOT BALL

TREES LS	QTY 3	BOTANICAL NAME Liquidambar styraciflua `Rotundiloba` TM	COMMON NAME Round-Lobed Sweet Gum	CONT B & B	<u>CALIPER</u> 3"Cal	
SHRUBS CAH	<u>QTY</u> 36	BOTANICAL NAME Clethra alnifolia `Hummingbird`	COMMON NAME Summersweet Clethra	CONT Cont.	<u>HEIGHT</u> 18"-24" HT MIN.	
GROUND COVERS SSC	<u>QTY</u> 138	BOTANICAL NAME Schizachyrium scoparium	COMMON NAME Little Bluestem Grass	CONT 1 gal		SPACING 18" o.c.





Transportation Division 10455 Armstrong St. Room 200A

> Fairfax, VA 22030 Phone: 703-385-7889

© 2018 KIMLEY-HORN AND ASSOCIATES, INC 11400 Commerce Park Drive Suite 400 Reston, Virginia Phone: 703-674-1300 Fax: 703-674-1350

Revisions



Date

NOTE: GROUNDCOVERS AND PERENNIALS TO BE INSTALLED WITH TRIANGULAR SPACING PLANT SPACING

8" O.C. 6.93" O.C. 10" O.C. 8.66" O.C. 12" O.C. 10.4" O.C. 18" O.C. 15.6" O.C. 24" O.C. 20.8" O.C. 36" O.C. 30.0" O.C. 31.5" O.C. 48" O.C.

GROUNDCOVER SPACING

DESIGNED BY DRAWN BY CHECKED BY

CITY OF FAIRFAX, VIRGINIA DEPARTMENT OF PUBLIC WORKS

UNIVERSITY DRIVE TRAFFIC CALMING

UPC # 113121

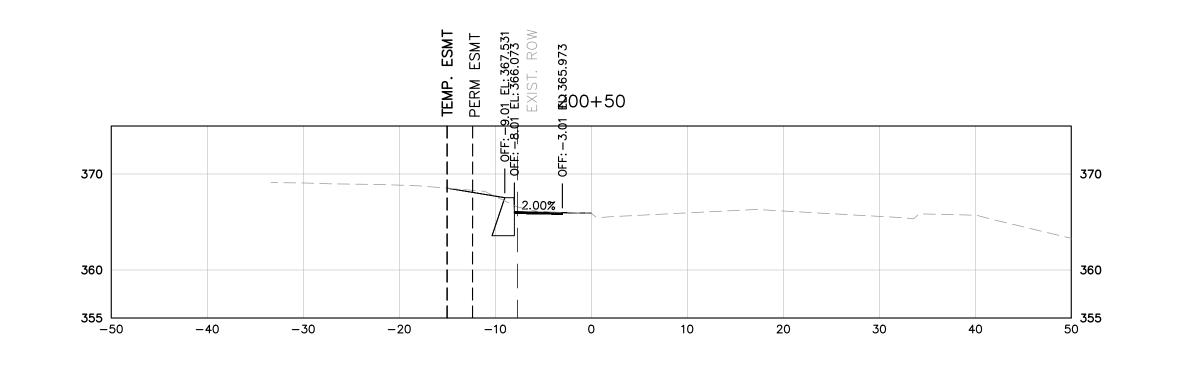
SCALE

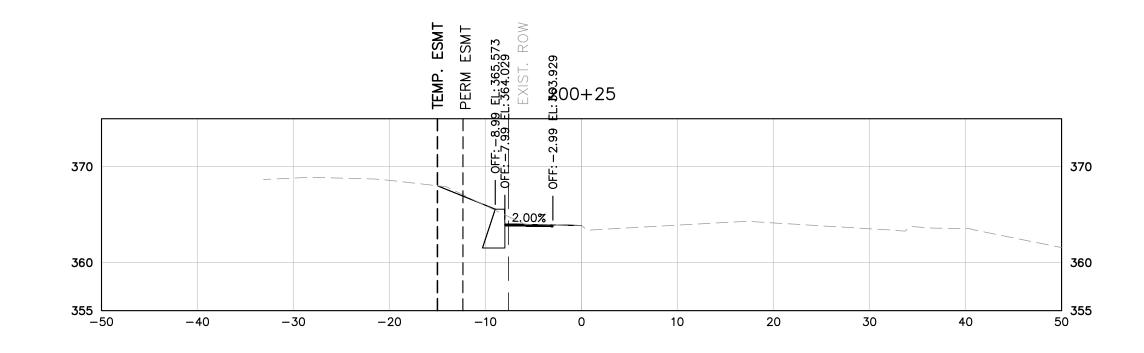
SCALE

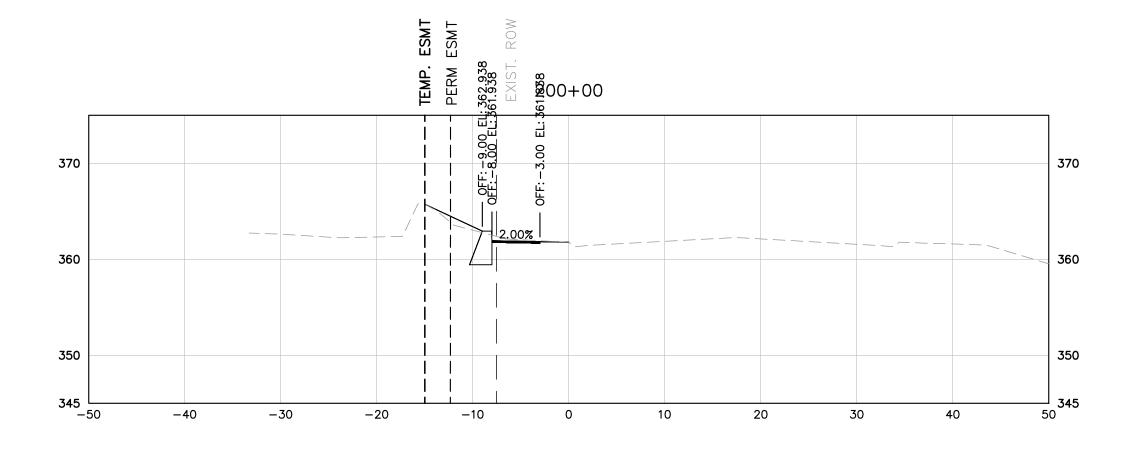
KENMORE DRIVE TO STRATFORD AVENUE

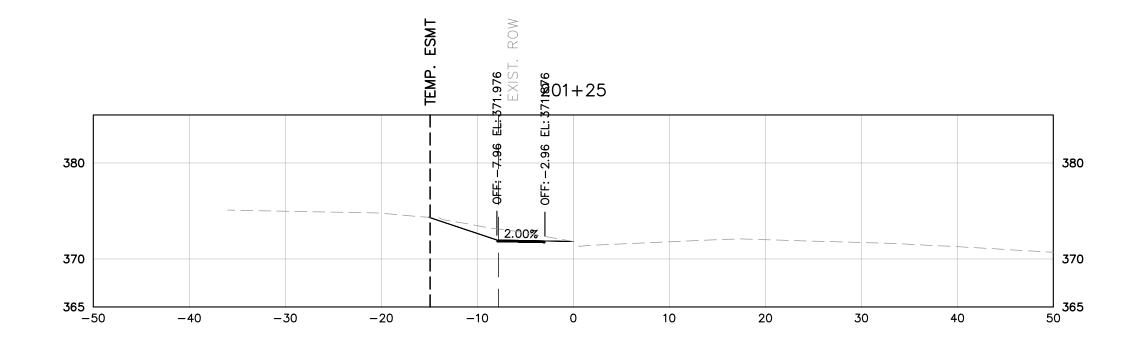
LANDSCAPE NOTES & DETAILS

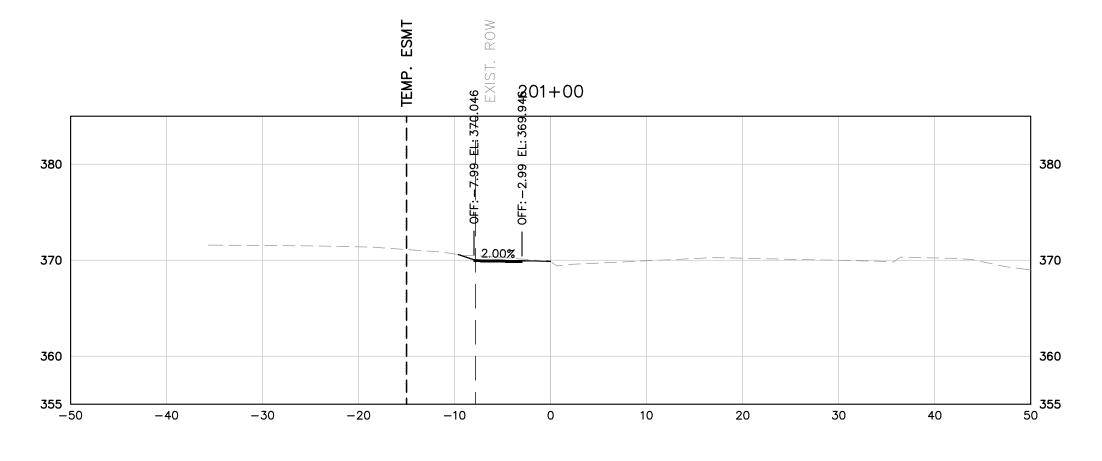
SEE GRAPHIC

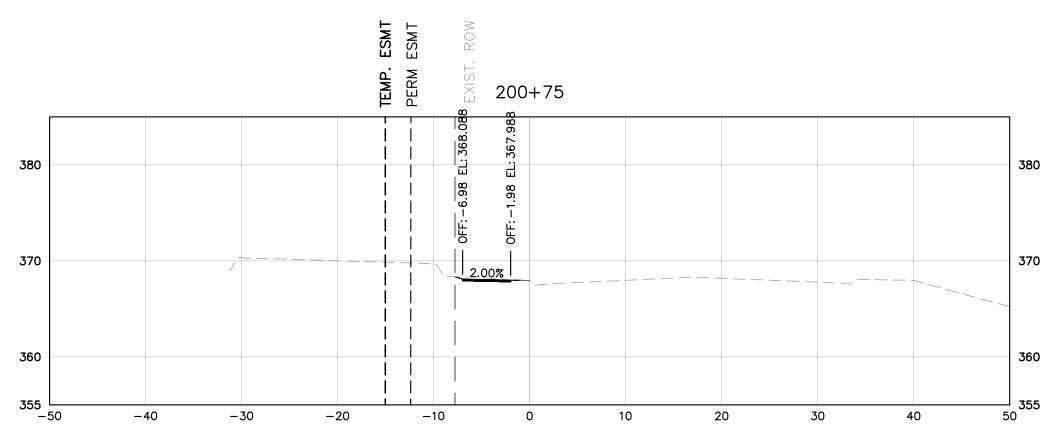












CITY OF FAIRFAX

Transportation Division 10455 Armstrong St. Room 200A Fairfax, VA 22030

DEPARTMENT OF PUBLIC WORKS

Phone: 703-385-7889

Kimley» Horn

© 2018 KIMLEY—HORN AND ASSOCIATES, INC.
11400 Commerce Park Drive
Suite 400
Reston, Virginia
20191
Phone: 703-674-1300
Fax: 703-674-1350

Seal



Revisions Date

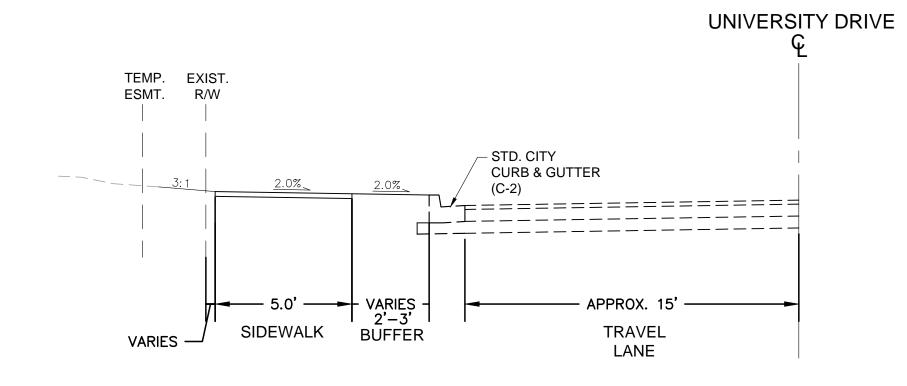
DESIGNED BY

DRAWN BY

CHECKED BY

TYPICAL SECTION

STA. 18+60 TO STA. 27+95



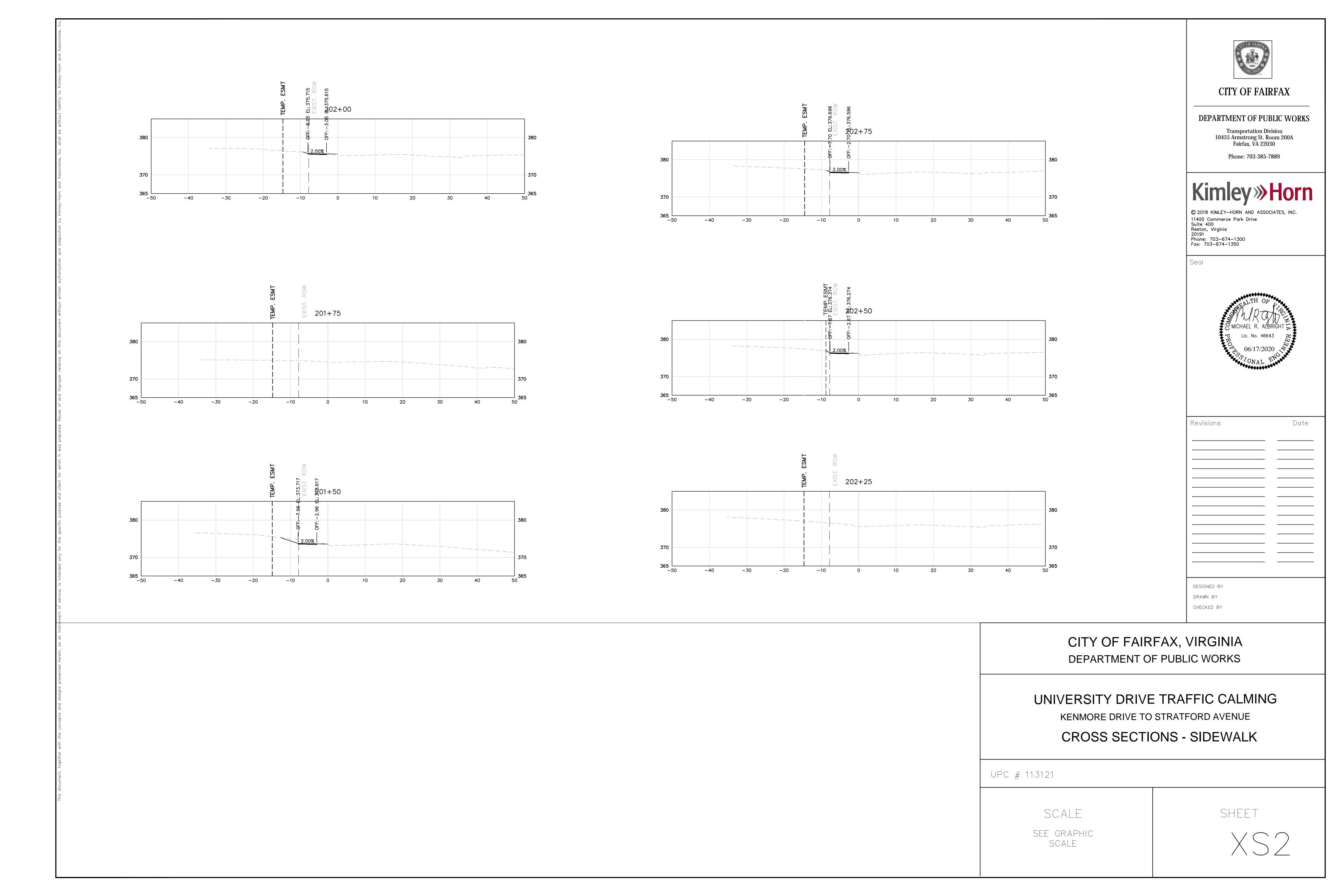
CITY OF FAIRFAX, VIRGINIA DEPARTMENT OF PUBLIC WORKS

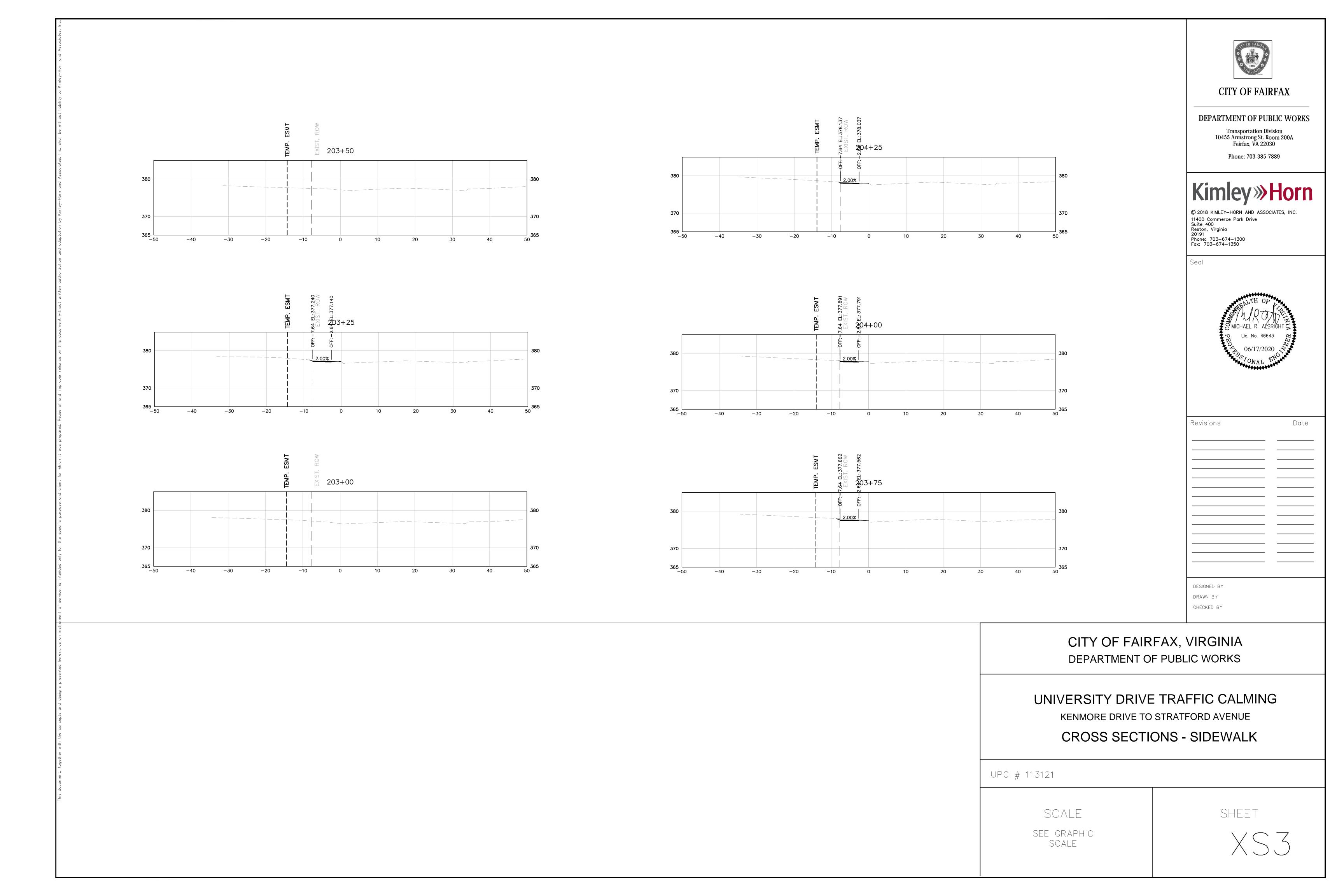
UNIVERSITY DRIVE TRAFFIC CALMING
KENMORE DRIVE TO STRATFORD AVENUE
CROSS SECTIONS - SIDEWALK

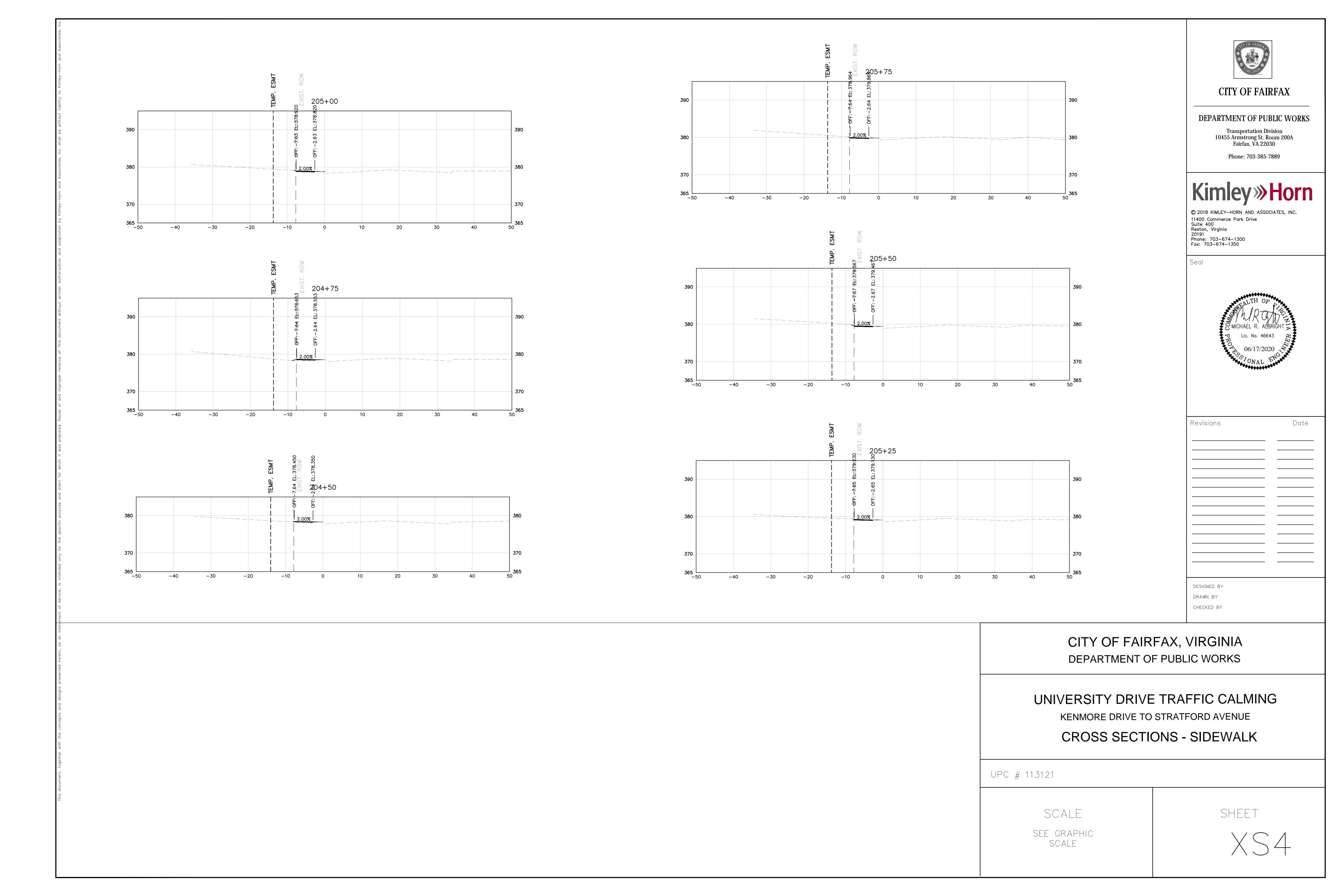
UPC # 113121

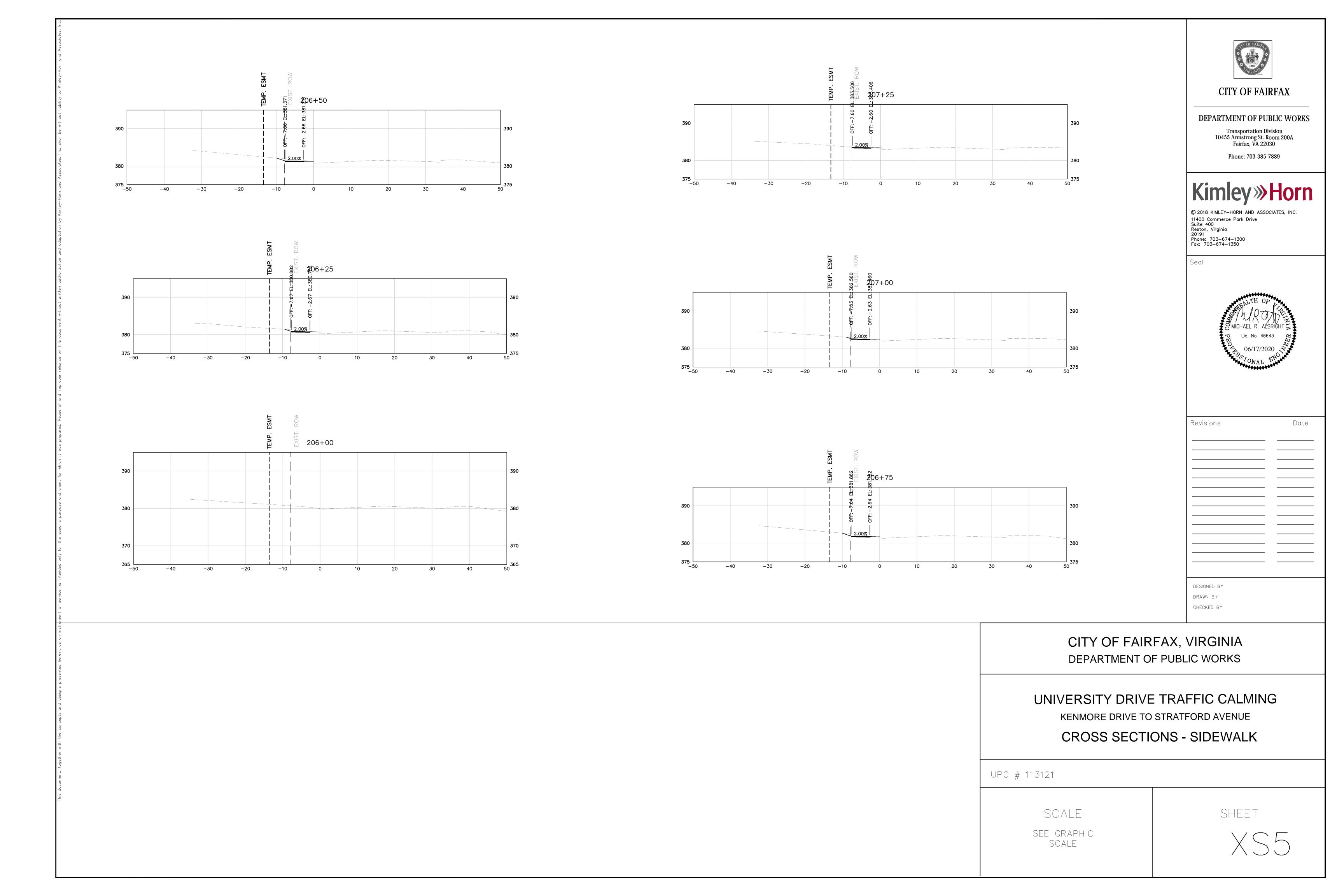
SCALE SEE GRAPHIC SCALE SHEET

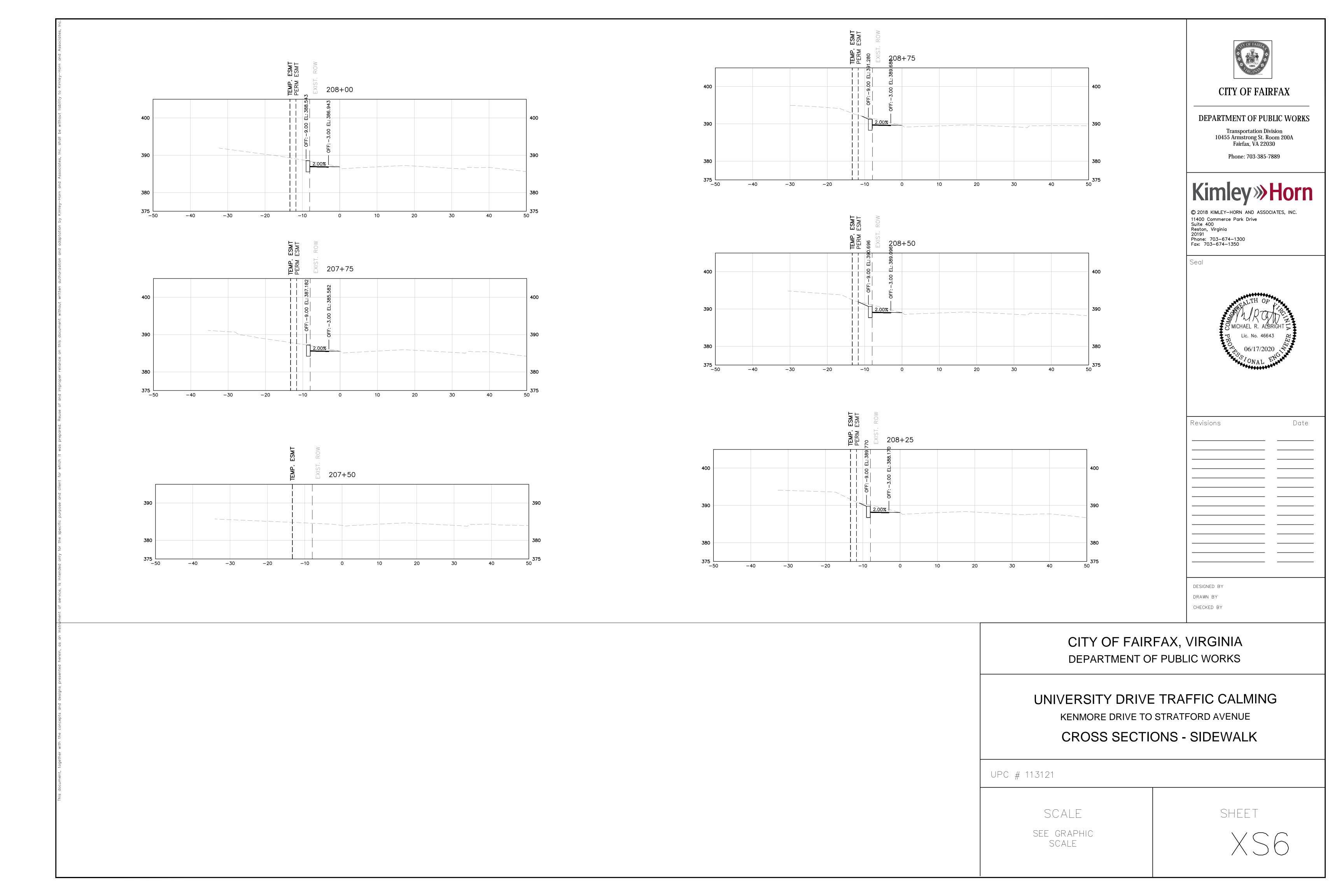
X S 1

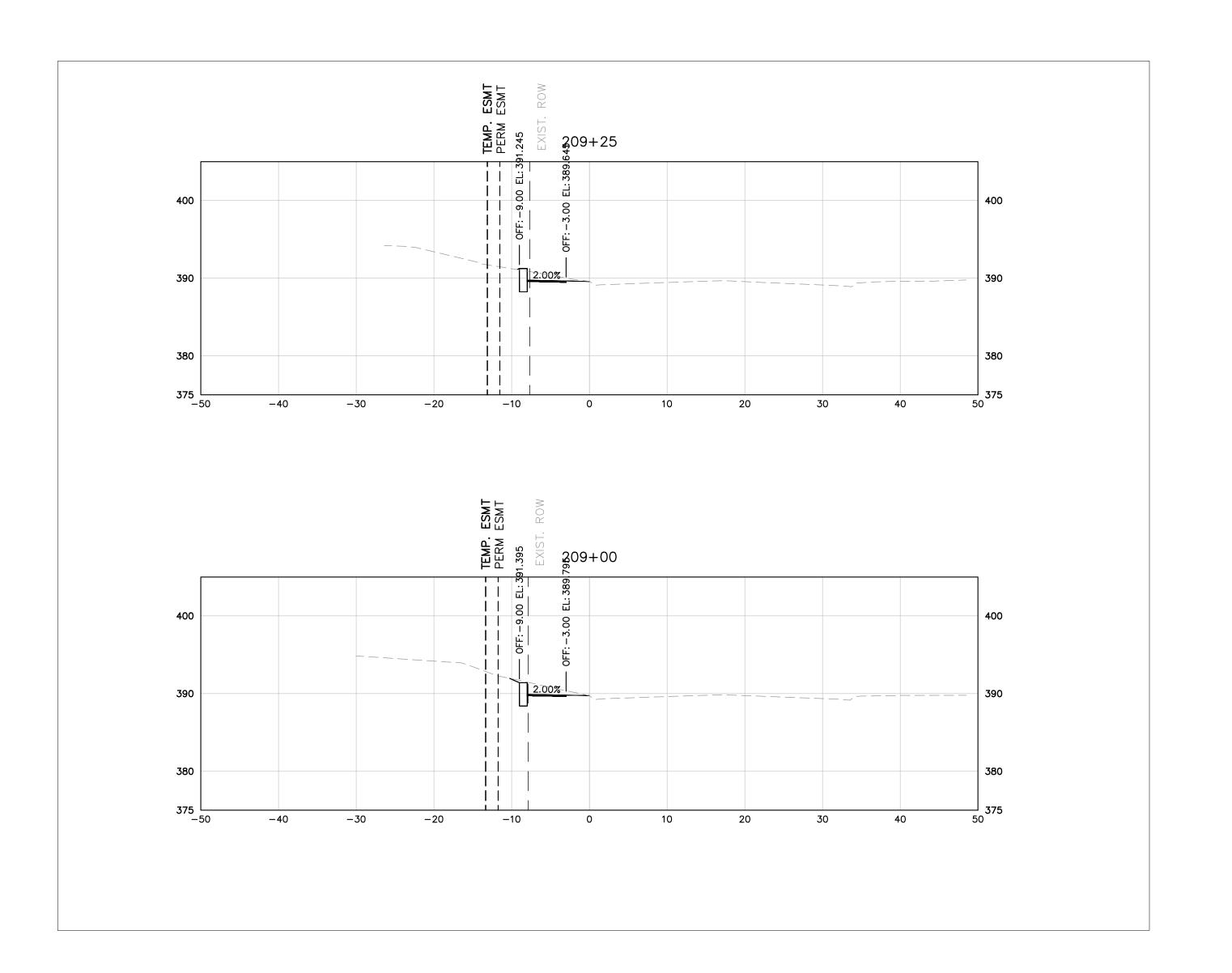


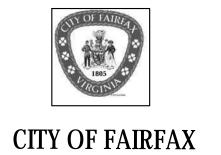












DEPARTMENT OF PUBLIC WORKS

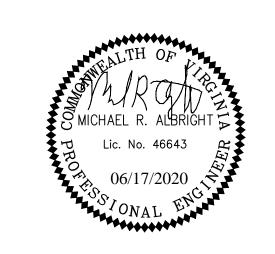
Transportation Division 10455 Armstrong St. Room 200A Fairfax, VA 22030

Phone: 703-385-7889



© 2018 KIMLEY—HORN AND ASSOCIATES, INC.
11400 Commerce Park Drive
Suite 400
Reston, Virginia
20191
Phone: 703-674-1300
Fax: 703-674-1350

Seal



Revisions	Date
	-
	-
	-
	-
	- <u></u>
	-
DESIGNED BY	
DRAWN BY	

CITY OF FAIRFAX, VIRGINIA DEPARTMENT OF PUBLIC WORKS

CHECKED BY

UNIVERSITY DRIVE TRAFFIC CALMING
KENMORE DRIVE TO STRATFORD AVENUE
CROSS SECTIONS - SIDEWALK

UPC # 113121

SCALE see graphic scale SHEET

 $\times S7$